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ABSTRACT

The collection of articles from publications of the Teachers of English to Speakers of Other Languages (TESOL) offers a theoretical basis for construction of effective English-as-a-Second-Language (ESL) programs. Articles address issues of national policy, content and design of academic programs, and the context for ESL learning. They are: "America 2000: A TESOL Response" (Mary Lou McCloskey, D. Scott Enright); "TESOL Statement of the Preparation of Primary and Secondary Teachers in the United States"; "TESOL Statement of the Education of K-12 Language Minority Students in the United States"; "TESOL Standards: Assuring Access to Quality Educational Experiences for Language Minority Students"; "Age and Rate of Acquisition of Second Language for Academic Purposes" (Virginia Collier); "How Long? A Synthesis of Research on Academic Achievement in a Second Language" (Collier); "A Conceptual Framework for the Integration of Language and Content in Second/Foreign Language Instruction" (Marguerite Ann Snow, Myriam Met, Fred Genesee); "The Cognitive Academic Language Learning Approach: A Bridge to the Mainstream" (Anna Uhl Chamot, J. Michael O'Malley); "Yes, Talking!: Organizing the Classroom To Promote Second Language Acquisition" (McCloskey, Enright); "Whole Language in TESOL" (Pat Rigg); "'You Stopped Too Soon': Second Language Children Composing and Revising" (Carole Urzua); "Kan Yu Ret an Rayt en Ingles: Children Become Literate in English as a Second Language" (Sarah Hudelson); The Bilingual/ESOL Curriculum Framework of the Denver Public Schools" (Janet K. Ramsay); and "ESL: The Regular Classroom Teacher's Perspective" (Joyce Penfield). (MSE)

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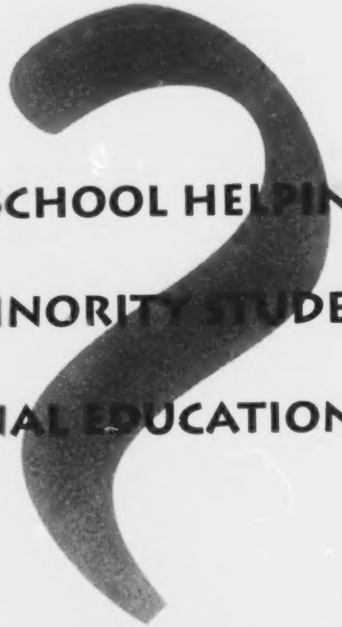

IS YOUR SCHOOL HELPING ITS LANGUAGE MINORITY STUDENTS MEET THE NATIONAL EDUCATION GOALS?

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TESOL

REPRINTS OF ARTICLES FROM TESOL PUBLICATIONS DESIGNED TO SUPPORT PROGRAMS OF INSTRUCTION FOR LANGUAGE MINORITY STUDENTS IN GRADES K-12

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INTRODUCTION

Denise McKeon, Chair
TESOL Task Force on the Education of Language Minority Students (K-12) in the United States

Educational reform is sweeping the United States. Calls for increased accountability, "world class" standards of achievement, and the challenge to meet the National Education Goals seem to echo through the corridors of every school building in the nation. In spite of the increased emphasis on US schools and students, however, one group seems to have been left out: the language minority students of the United States.

According to the 1990 census, language minority students are one of the fastest growing groups of students in US schools. They are students who learned a language other than English as their first language. These students may be immigrants, refugees, or native-born Americans. They may come to school with extensive formal education or they may be academically delayed or illiterate in their first language. Such students arrive at school with varying degrees of English proficiency. Some may not speak English at all; others may speak English, but need assistance in reading, writing, and using language for academic purposes.

Schools that serve such students often have questions about the most effective way to help these young people acquire English language skills and advance academically, This is increasingly true as schools and teachers struggle with the challenge of reforming the nation's educational system. TESOL's Task Force on the Education of Language Minority Students (K-12) in the United States has compiled this collection of policy statements and reprints of articles first appearing in *TESOL Matters* and *TESOL Quarterly* to help schools and educators as they plan and implement programs of second language instruction.

The policy statements and articles contained in this Resource Packet provide a sound theoretical base from which schools can begin to construct effective programs. First, the TESOL Policy Statements, TESOL Standards for Ensuring Access to Quality Educational Experiences for Language Minority Students, and the *America 2000* article by McCloskey and Enright offer an in-depth discussion of TESOL's position on the education of language minority students and the need for comprehensive teacher training in this time of educational reform.

Next, the content and design of academically-based language programs is discussed. Questions such as *how long does it take for a child to learn English well enough to function in an all-English classroom* are answered in Collier's articles. Frameworks for general ESOL curricula and content-based language teaching are offered (see Ramsay; Snow, Met, & Genesee; and Uhl Chamot & O'Malley). Reading and writing take center stage in articles by Hudelson, Rigg, and Urzúa.

Finally, the context in which language is learned is addressed. Articles by McCloskey and Enright and Penfield explore the classroom and school climate in which language instruction occurs.

Although there are still many unanswered questions about the acquisition of English in an academic setting, these articles offer TESOL's best professional advice for schools and teachers serving language minority students in this time of educational reform. Language minority students are the future of this country: we cannot afford to leave them out.

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TESOL RESOURCE PACKET

TABLE OF CONTENTS

America 2000: A TESOL Response 1
Mary Lou McCloskey & D. Scott Enright

TESOL Statement on the Preparation of Primary and Secondary Teachers in the United States 11

TESOL Statement on the Education of K-12 Language Minority Students in the United States 12

TESOL Standards: Ensuring Access to Quality Educational Experiences for Language Minority Students 13

Age and rate of acquisition of second language for academic purposes 15
Virginia Collier

How long? A synthesis or research on academic achievement in a second language 29
Virginia Collier

A conceptual framework for the integration of language and content in second/foreign language instruction 41
Marguerite Ann Snow, Myriam Met, & Fred Genesee

The cognitive academic language learning approach: A bridge to the mainstream 51
Anna Uhl Chamot & J. Michael O'Malley

Yes, talking!: Organizing the classroom to promote second language acquisition 63
Mary Lou McCloskey & D. Scott Enright

Whole Language in TESOL 75
Pat Rigg

"You stopped too soon": Second language children composing and revising 87
Carole Urzúa

Kan yu ret an rayt en Ingles: Children become literate in English as a second language 101
Sarah Hudelson

The bilingual/ESOL curriculum framework of the Denver public schools 111
Janet K. Ramsay

ESL: The regular classroom teacher's perspective 115
Joyce Penfield

America 2000

A TESOL Response

by Mary Lou McCloskey and D. Scott Enright

President George Bush recently made public a National Education Strategy for improvement of education in the next decade entitled *America 2000*. While Teachers of English to Speakers of Other Languages, Inc. (TESOL) commends him for bringing attention to educational issues and for looking toward improved education, the Association feels the goals and proposed strategies to accomplish them deserve close examination by those who serve language minority students in the US.

Educational goals for *America 2000*

In 1990 President George Bush and the National Governor's Association, at a meeting conspicuous for the absence of professional educators, adopted six goals for education for the remainder of the century (*America 2000*: An Education Strategy—Sourcebook). They proposed that by the year 2000:

1. All children in America will start school ready to learn.
2. The high school graduation rate will increase to at least 90 percent.
3. American students will leave grades 4, 8, and 12 having demonstrated competency in challenging subject matter including English, mathematics, science, history, and geography; and every school in America will ensure that all students learn to use their minds well, so they may be prepared for responsible citizenship, further learning, and productive employment in our modern economy.
4. US students will be first in the world in science and mathematics achievement.
5. Every adult American will be literate and will possess the knowledge and skills necessary to compete in a global economy and exercise the rights and responsibilities of citizenship.
6. Every school in America will be free of drugs and violence and will offer a disciplined environment conducive to learning.

A "National Educational Strategy" to accomplish the goals

On April 18, 1991 President Bush released *America 2000*, which he referred to as his "National Education Strategy" designed to accomplish these goals.

The President's report is divided into four sections with a potpourri of proposals and strategies mentioned throughout. After reviewing the full report, as well as the President's comments in releasing is, TESOL has identified four central sets of strategies for improving American schools: national testing, choice incentives, innovation support, and community participation. Following is a brief review of these strategies.

National testing

Bush proposes to establish "World Class Standards" (national education standards) and "American Achievement Tests" (national standardized testing) and calls for a "National Report Card" for comparing schools across the country. This proposal is disconcerting at a time when school districts, educators, and even the president of the Educational Testing Service are decrying the wide practice of "teaching to the test" and calling for de-emphasizing the use of standardized tests.

Our schools are already burdened by numerous standardized, state, and district tests which put low-income and language minority students at a disadvantage, and which primarily serve to sort students into the few gifted successes and the many ungifted failures. The long record of close correlations between parents' income, educational attainment, and student achievement scores is clear and well-documented, yet the administration's strategy promotes using test scores to evaluate students and compare schools across the nation and to release this information regularly in a national report card on the schools. A great deal of instructional time and money could be saved if the mean incomes of families in the school population were compared across states and school districts for a more accurate report of student needs.

The record for standardized testing of language minority students in the US is also clear. These instruments do not capture the diverse strengths of our language minority students accurately or equitably. In the words of Dr. Asa Hilliard, noted expert on educational assessment and multicultural education, educators have failed to recognize "the genius that is common in the masses of our children. We all have enormous mental capacity. Children rarely realize this potential, however, because teachers are widely pessimistic about their abilities, particularly for minority and disadvantaged children." What educators need are innovative ways to recognize and utilize our students' genius, not new ways to label and sort students.

Choice incentives

America 2000 proposes new choice incentives, including options for parents to choose private schools. ESL specialists have several questions about the impact these proposals will have on the families of ESL students. What about children of parents who don't have transportation options? Who can't pay the difference between their voucher and the private school tuition? Who can't read the brochures comparing the schools they may choose from? Who are so busy with two or three jobs that they can't visit the schools to make a choice? What about parents of rural students, who can't make a choice because their children would be spending more time traveling than attending school?

While the intent of the choice solution is educational excellence, TESOL fears that the result will be educational inequity. The proposed choice solutions are likely to exclude the students, especially ones in the language minority, who could benefit most from a full range of educational opportunities. TESOL agrees with Werner Rogers, superintendent of the Georgia Public Schools, when he states, "I am concerned that the President's choice proposal will only widen the gap between the opportunities available to the haves and the have-nots. School choice would inevitably foster inequities among schools, a concept struck down by the US Supreme Court in 1954. The inequities of choice would be based on class, not race. A far better solution is for communities to work together to make every school a school of choice." Perhaps Jeffrey L. White, Georgia's 1991 Teacher of the Year, summarizes TESOL's response to this strategy best: "I think choice is a mistake. It presupposes good schools and bad schools. As a parent who is also a teacher, I believe that if a school isn't good enough for my children, it isn't good enough for any children." What the American school system needs is federal as well as local support for improving and diversifying the educational opportunities available to students and for making these opportunities available to all students—not new ways to ensure unequal student access to existing educational resources.

> *"As a parent who is also a teacher, I believe that if a school isn't good enough for my children, it isn't good enough for any children."* Jeffrey White, 1991 Georgia Teacher of the Year

Innovation support

America 2000 proposes several forms of innovation for improving US education. These include alternative routes to certification, teacher incentives tied to student achievement, Governors' Academies to enhance principal and teacher training, and at least 535 "New American Schools" that break the mold of existing school designs.

TESOL recognizes the importance of innovation for schools to apply and expand the current understanding of what is good education for the language minority population. TESOL is concerned, however, that the Bush proposals have the potential to limit innovation, decrease equity, and restrict the power of the main participants in US schools.

Although alternative routes to certification may indeed provide means for qualified persons to enter education without redundant training, TESOL is concerned that these routes will provide means of entry to second language education for unqualified persons who understand neither the language development processes, nor the cultural variables, nor the methodology of language teaching and learning. Even though tying teachers' financial rewards to student achievement appears to be an incentive for teachers, it may in fact motivate them to teach only to the test or to flee from schools in which diverse populations offer challenges to attainment of high test scores. While Governors' Academies to promote advanced learning of administrators and teachers may be enriching for a few, TESOL is concerned that they will not reach the broad audience who needs this training. TESOL is also concerned that the expertise of parents, teachers, educators, and students will not be fully utilized in addressing the needs of diverse school populations. Continued education for teachers and principals should be encouraged, but must include opportunities in university and school settings for these professionals to examine their practice and to prepare themselves for the complex, multicultural settings increasingly common in US schools.

Providing seed money for innovative schools is an exciting concept, yet the New American Schools are limited in advance by the requirement of consensus on World Class Standards and the focus on scoring well on the "National Achievement Tests." Bush's recommendations for leadership in this process muffle the voices of educators, teachers, parents, and students while amplifying the voices of business officials and politicians. The definition of "innovative" becomes a narrow one in which the tools to measure success preclude its attainment by immigrant and refugee students. *America 2000* never acknowledges the reality of increasing enrollment of minorities and foreign-born students in US schools. The focus on a few New American Schools further negates the concepts of equity and access that should be integral to US education. What American schools need is innovation that recognizes the needs of an increasingly diverse school population and empowers everyone involved in the education process.

Community participation

In keeping with the overall Bush administration emphasis on volunteerism and local control, *America 2000* includes several calls for community participation in improving the nation's schools. Bush uses an advertising slogan for athletic shoes to encapsulate this strategy: "Across this country, people have started to transform the American school. They know that the time for talk is over. Their slogan is: Don't dither, just do it." The strategy includes numerous calls for businesses as well as local community agencies to invest money and expertise in devising and supporting better standards and better schools for children and adults.

Once again, TESOL is in full agreement with the overall principles on which this central strategy is based—involving everyone in becoming lifelong learners and enlightened supporters of the schools. However, TESOL is doubtful that the proposals forwarded by President Bush actually embody that principle. The specific activities suggested within this strategy are as notable for what they do not include as for what they do include. Nowhere are the pressing needs of US parents and families, especially language minority families, mentioned. These include needs for extended child care, improved child nutrition, parental orientation and involvement in school activities and for supporting children's learning, reforms within the schools to accommodate this involvement and support, more accessible and diverse adult and parent education programs, and overall health and social services support for families with infants and school-age children. As ESL/EFL professionals interpret the Bush community strategy, parents are to take on increased responsibility for their children's and their own education while receiving decreased support for living up to that responsibility.

The other primary effect of the community participation strategy would be to move business into the center of educational reform and teachers to its periphery. Bush deliberately excludes teachers and other "professional educators" from primary input and participation in any of his national strategies, from designing new tests to developing new schools. In answering the question "Who does what?" in carrying out the proposals in *America 2000*, the Bush plan lists the president, Congress, the governors, the business community, parents, and "the community level" as the key players, with principals and teachers only given mention as part of this final category. When it comes to community participation in educational improvement, there is need for programs which address the day-to-day realities of parents and students, not further volunteerism rhetoric; we need policies of inclusion and not of exclusion.

From the perspective of committed language teachers, *America 2000* is generous in scope yet miserly on specific solutions. Many of the proposals found in the President's report fail to support his own goals and principles. As a supposedly comprehensive blueprint for "transforming America's schools" and as a "long-term strategy to help make this land all that it should be," *America 2000* is fundamentally flawed in two respects. First, the report is predicated on biased and inaccurate conceptions of how schools are organized, who attends them, and who in them has the greatest needs. Only once are students with special needs (referred to as "at risk") mentioned. In the entire report, there is no mention of the language minority population which is estimated to make up at least 10% of our school age population. Clearly, in the President's view of education, his New American Schools are not for new

American families.

Second, the report represents a major retreat on the part of this presidential administration from any serious federal commitment to the future of our schools. The President requests a total of $690 million from Congress to fund his national strategy and calls on business and community leaders and other volunteers to come up with the real money, personnel and other resources to reform the schools. But as Albert Shanker, President of the American Federation of Teachers, puts it, ". . . should we be relying on private contributions for this project anyway? We didn't try to fund the Stealth Bomber or Operation Desert Storm with contributions. When we decide something is really important, we also decide it is important enough for the government to pay for. I think that's true here." TESOL concurs.

In a year when it appears that over $150 billion is being committed to the US Savings and Loan bailout (current estimates for the full price-tag approach $500 billion), when estimates for US expenditures for the war in the Gulf range from $8 billion to 30 billion, and when more than $6 billion is being committed to Star Wars technology and research, TESOL believes that the President belies his true commitment to becoming the "Education President"; it is rhetoric and not reality.

Alternate Goals and Strategies

This US presidential administration (and to a large degree, this US Congress) have sidestepped the needs of second language learners and disadvantaged students in general within their educational proposals. There are, however, several US educational advocacy groups making long-term recommendations for school reform to meet the needs of these students. Many of TESOL's suggestions are based on the work of these organizations, and interested readers are urged to contact them for further information (see information at the end of this article). The National Coalition of Advocates for Students (NCAS) has done an excellent job of both critiquing *America 2000* and providing an alternative set of educational goals for all students including language minority and disadvantaged students for the decade ahead. NCAS outlines ten "basic student entitlements" for reforming schools in the 90s:

Entitlement 1: Children are entitled to have parents, advocates, and concerned educators included in all decisions affecting their schooling.

Entitlement 2: Children are entitled to learn in an integrated, heterogeneous setting responsive to different learning styles and abilities.

Entitlement 3: Children are entitled to developmentally appropriate curriculum and teaching strategies that are comprehensive and culturally supportive.

Entitlement 4: Children are entitled to access to a common body of knowledge and the opportunity to acquire higher-order skills.

Entitlement 5: Children are entitled to a broadly based assessment of academic progress and grading structures that enhance individual strengths and potential.

Entitlement 6: Children are entitled to a broad range of support services that address individual needs.

Entitlement 7: Children are entitled to attend schools that are safe, attractive, and free of prejudice.

Entitlement 8: Children are entitled to attend school every day unless they pose a danger to other students or school staff.

Entitlement 9: Children are entitled to instruction by teachers who hold high expectations for all students and who are fully prepared to meet the challenge of diverse classrooms.

Entitlement 10: Every child is entitled to an equal educational opportunity supported by provision of greater resources to schools serving low income, minority, or immigrant students.

This set of student rights encompasses many of the president's and governors' goals, but it shifts the focus of reform away from what the country needs to what students and their families need. Implicit in the list are the assumptions that (a) any national reform efforts should be designed to support the education of all students, including language minority, disadvantaged, and other "at risk" students; and (b) those most affected by any national reform efforts—students, their families, and the teachers and other educators who serve them—must be directly involved in planning and implementing those efforts. This list offers a potential framework for guiding national school reform programs for the decade ahead.

Educational Reform for Language Minority Students and Families

So how might the NCAS list of student entitlements be applied to improving the education of our students? We believe that national educational reforms in the 90s which address the needs of the rapidly changing and increasingly diverse US student population are needed in four specific areas: national curriculum reform, national teacher education reform, national support for refinancing the public schools and local school restructuring, and national family support initiatives. Many proposals in these areas are already being developed by the advocacy groups mentioned and by TESOL itself. A brief description of each area of reform follows.

National curriculum reform

America 2000 places testing at the center of educational reform in the 90s. However, curriculum reform should instead be the primary vehicle for improving education at the national level. National educational reform initiatives in the 90s must include developing guidelines and programs for applying our best knowledge about how students learn, particularly how they learn language to create high-quality learning materials, activities, and teaching strategies.

US educational reform in the 90s must also support the development of multicultural and inclusive curriculum.

It is already known that teaching and learning are interactive processes, and students learn best in certain conditions: when their physical and psychological safety needs are met; when they have opportunities to construct knowledge for themselves; when they are engaged in social interaction with adults and other students; when their own interests motivate learning; and when their individual varia-tions in learning are recognized and incorporated. It is also true that language learning best occurs in an environment in which students are active and have opportunities to use language, negotiate meaning, and accomplish meaningful tasks; in which students have adult mediation in this negotiation; in which students' unique linguistic cultural backgrounds are recognized for their strengths; and in which students are allowed adequate time and support in the language acquisition process.

Our next challenge is to incorporate these insights into curricula nationwide and to support research that will provide new insights and methods for supporting second language learners. The National Association for the Education of Young Children (NAEYC) has taken strong stands on curriculum reform in its 1988 policy statement on Developmentally Appropriate Practice and its 1991 Guidelines for Appropriate Curriculum Content and Assessment and is promoting training to prepare teachers to implement programs that apply these policies.

In addition, a large number of US professional education associations involved in curriculum development have begun to collaborate formally in preparing national curriculum reform proposals for the 90s. Members of the coalition Alliance for Curriculum Reform include educators in the fields of art, science, math social studies, English, and ESL. TESOL is a member of this coalition. In addition, the US needs national educational-curriculum reform to provide for a diverse curriculum allowing for individual differences and learning styles. For learners of English, alternatives should include quality bilingual programs whose goals are not only to make a smooth transition into English but also to attain high-level language skills in their native languages. TESOL knows that the development of quality bilingual programs can be facilitated if schools produce fully bilingual individuals. David Ramirez's recent report on his longitudinal study comparing models of English-immersion and bilingual-education programs (Aguirre International, 1991) found that the teachers in the three programs studied did not teach language or higher-order cognitive skills effectively: teachers did most of the talking and learners did not have frequent opportunities to practice language and develop more complex language and thinking skills. National programs such as Title VII and Chapter 1 should recognize the need for diverse educational practices that address differences in languages, backgrounds, and learning styles; incorporate what we know about language learning; and have as a goal the development of fully bilingual individuals who may become the teachers in future programs.

US educational reform in the 90s must also support the development of multicultural and inclusive curriculum to acknowledge and use the advantage of students' diverse backgrounds for the benefit of one and all. A culturally inclusive curriculum describes histories, cultures, and languages as dynamic wholes and presents issues and content from diverse points of view. It directly involves students' backgrounds and experiences in learning activities which expose students to their own cultures and histories while also exposing them to new cultures and experiences. Again, while widespread practices often do not reflect responses to this need, there are exemplary programs which are working toward quality multicultural education. California Tomorrow, for instance, has carried out an Immigrant Studies Project to document the needs and experiences of foreign-born students in the California public schools and to document promising practices for their education. Rethinking Schools, an organization dedicated to discussion and action on pertinent educational issues, took the 500th anniversary of Columbus' voyage to the Americas as an opportunity to celebrate the children of the peoples who were already here, in *Rethinking Columbus: A Special Issue of Rethinking Schools Dedicated to the Children of the Americas*. In addition, several excellent teaching handbooks and curriculum guides are available for developing culturally inclusive curricula and practices. Associations such as NAEYC, NABE (National Association for Bilingual Education), and others have published bibliographies of these resources.

Finally, the US educational reform in the 90s needs appropriate evaluation to meet curriculum goals not national productivity goals. Students should not be assessed with unitary measures that reduce them to a "bottom line" for comparison with other countries. Rather, students should be assessed by culturally fair, instructionally informed, and informing assessments with performance-based multiple measures that provide students with a variety of ways to show what they can do. These approaches to assessment are not beyond imagination but are being used right now in many programs across Canada and other countries. In the US, bilingual/ESL program personnel are also developing appropriate assessment techniques. For example, Janet Orr and Teddi Predaris of the Fairfax County, Virginia Public Schools Program in English as a Second Language (ESL) are implementing their plan to use portfolio assessment for placing and evaluating students. Also, North Carolina is training school staff who work with English learners in appropriate alternative measures for ESOL students, including team (administration, teachers, and support staff) observations of student performance over time and portfolio assessment.

National teacher education reform

We cannot implement national curriculum reforms designed to meet the needs of English learners within the NCAS goals without careful consideration of how we prepare our teachers for working with learners of English. One key way to address the needs of increasingly diverse and rapidly changing student population in the 90s is through providing ongoing in-service education activities to the teachers, administrators, and other educators who are faced with these diverse populations. Jean Handscombe, a former President of TESOL and former Director of English as a Second Language/Dialect (ESL/D) Services in the North York, Ontario Schools, has pointed out that by the end of the 1990s our working assumption should be that "Every teacher is a teacher of ESL." Similarly, US professional development initiatives in the 1990s must include in-service education programs focusing on second language development and multicultural education for every teacher and educator who works with ESL students. TESOL's own Professional Development Task Force and its Interest Section leaders are already preparing initiatives in these areas. At its recent midyear meeting, the TESOL Executive Board approved policy statements calling for appropriate programming for learners of English and for preservice and in-service training to prepare both the ESOL teachers and the content-area or grade-level teachers who work with learners of English to acquire the "special skills which prepare them to deal with language minority students in an academic setting."

Preservice education programs in the US are also under intense scrutiny. Coalitions such as the Holmes Group (made up of several universities and colleges with teacher preparation programs) have issued proposals for revising the content of preservice programs and the kinds of professional experiences that student teachers must undergo to become certified. Any national proposals or guidelines for such revisions should also include content and experiences centering on working with linguistically and culturally diverse students.

Another possible direction for national teacher education reform in the decade ahead would be to develop national core standards for K12 teacher certification which would include understanding second language development and cultural differences and being able to respond to linguistic and cultural diversity in the classroom. A task force of the TESOL Executive Board is already reviewing the certification issue, and the TESOL Committee on Professional Standards and various TESOL Interest Sections have also begun to develop positions and statements on national certification. Ideally, all three of the areas we have reviewed here inservice education, preservice education, and national certification standards would be addressed simultaneously through an integrated program of national teacher education reforms.

National restructuring: Addressing the issues of equity and local control

Two of the most serious flaws in *America 2000* are that it reduces equality of educational opportunity in the guise of adding "excellence" (particularly in the Choice proposals), and that it excludes teachers and other educators from its largely "top down" proposals (particularly the National Standards and Testing proposals). We believe that both problems must be addressed in preparing national reform proposals to meet the ten NCAS goals for all US students, including second language learners.

Equity. In *Savage Inequalities* (Crown Books, 1991), the author John Kozol, an education reformer, outlines the extremes of wealth and poverty that exist in the US schools. Kozol cites, for example, the situation in Texas since the Rodriguez case (a class action suit filed on behalf of poor children in San Antonio over inequitable funding) was filed in 1968: "Things have not changed very much in the poor neighborhoods of Texas. After 23 years of court disputes and numerous state formula revisions, per-pupil spending ranges from $2000 in the poorest districts to some $19,000 in the richest." In California, where efforts toward equity have resulted in no more that $300 difference in per-pupil spending among all but 5% of districts statewide, a result has been that a meager 3.8% of state income is spent on education, ranking California 46th out of the 50 states. In affluent school districts in California, tax exempt foundations have been formed to channel extra money to local schools.

If we are to accomplish our goals for second language learners by the year 2000, it is imperative that we develop national strategies for refinancing the US public schools. The ways in which schools receive their funding (largely through local property taxes) must be changed, or federal financial support must be provided to low tax-base school districts to equalize educational opportunities for the students who live there. In addition, federally financed educational reforms in the 90s must have traditionally underserved student populations including second language learners at their center. The Children's Defense Fund (an NCAS member) has already developed recommendations along these lines in *The State of America's Children 1991*. TESOL agrees with President Bush's oft repeated statement that "our children are our future," but would merely point out that "our children" includes language minority, ethnic minority, and poor children.

> *TESOL, too, believes that educational reform in the 90s should encourage families' full participation in their children's and their own education.*

Local Control. TESOL's recommendations for supporting national funding initiatives in addition to national certification and curriculum standards and national teacher education reform do not presuppose total national control over the actual ways in which administrators and teachers implement these educational practices, however. The Bush administration's *America 2000* proposals ignore the substantial efforts, already under way in school districts across the US, which aim to return control over curriculum, assessment, and school governance decisions to the teachers, administrators, and students and their families who must live with the consequences of these decisions. This process is often referred to as "school restructuring" and "school-based or on-site based management" programs. TESOL believes that ignoring these efforts toward restructuring is a mistake.

Instead, TESOL supports "bottom up" educational reform in which individual school communities, teachers, administrators, and students and their families have control over curriculum and instructions and governance decisions. The growing diversity in the US schools requires a strong national consensus on what our educational goals should be, accompanied by flexible guidelines for reaching those goals within individual school districts and schools. The bureaucratization of the public schools is an idea whose time has come.

National family support initiatives

As pointed out earlier, *America 2000* demands that parents take on increased responsibility for their children's and their own education while diminishing federal support for living up to the increased responsibilities. TESOL, too, believes that educational reform in the 90s should encourage families' full participation in their children's and their own education. However, we also believe that no national educational reform agenda will be successful without being embedded in a larger strategy that provides federal support for meeting the everyday needs of families. To their credit, many local school districts and communities are providing such support without federal guidance of financial support, but these efforts vary in quality and do not come close to adequately addressing these needs.

Family support initiatives aimed at fulfilling the NCAS student entitlements by the year 2000 must address today's parental employment circumstances and schedules. Federal support must be provided for high-quality child care programs for all US families, including second-language learners' families. This should include extended day (before and after school) programs in the public schools, increased tax incentives and financial support for private and work-place based day care programs, and a national parental leave policy. National family support initiatives in the 90s should also be developed for the provision of family nutrition and health care sources, including meals and specific health care services in the public schools themselves. And national initiatives must be developed for offering all US families the opportunity to send their children to college through both federal financial support and tax incentives as well as through public and private collaboration.

If the US is to empower parents in their efforts to support their children's and their own education, several other initiatives are needed. Family literacy programs that provide for collaboration between adult education and public school education components should be promoted. A few models for such programs are currently being funded through Title VII. For example, in Project CLASS, in Atlanta, Georgia, two and sometimes three generations of immigrant and refugee families come to school together in the evenings to develop their language and literacy skills, and parents are given assistance in learning how to support their children's learning at school. Although Family Literacy projects show great promise for helping us to meet the needs of second language learners and their families, funding has actually decreased in the past year. Educational reform should provide increased support for these kinds of programs and should go even further to seek out other innovations for addressing students' and parents' needs in a collaborative, integrated fashion.

Other national initiatives to help parents to support their children in schools should be designed to ensure that families and parents are direct participants in any educational decisions made for their children. The kinds of choice incentives promoted in *America 2000* are not adequate. Choice incentives can result in school districts that have a few high quality schools, in which parents with time, money, educational background, more information and connections have distinct advantages in getting their children admitted. The result of the subsequent migration of high-achieving students with proactive parents into magnet schools is the draining of these role models from other schools in the district and the identification of students not in the special schools as "losers." So, providing choices must include educating parents in how to be involved and proactive in decision making in schools on behalf of their children, not simply providing choices only some parents know how to utilize. Similarly, national initiatives for getting parents more involved in their children's education will require change on the part of schools and educators, not just change on the part of parents. For example, getting parents who do not speak English or are not proficient in the language to attend school events and be involved in schools will require special efforts to make activities culturally relevant and to use bilingual personnel in situations in which such use is indicated.

Like President Bush, TESOL believes that a national mandate exists for improving the ways in which we support our children's education. Unlike the president, however, TESOL also believes that educational reform presupposes increased family involvement in the schools and increased support for families in their daily lives outside the public schools. This involvement and support is especially important for second language learners and their families.

Conclusion

True, the type of educational reform TESOL recommends here costs money. TESOL agrees with those who claim that money alone won't solve our educational problems, but we also believe that only charlatans would suggest that our educational problems can be solved without spending a lot more money! If the Bush administration is eager to compare our education with that of other industrialized nations, let the comparison be in educational spending, in which we rank 14th out of 16 industrialized countries.

TESOL supports the inclusion of careful accountability, including financial accountability requirements in all of the programs outlined here, so that our blueprint for educational reform does not become a blueprint for federal waste in spending. Clearly, many of the ideas and proposals described here require further development, with an eye towards avoiding past bureaucratic and fiscal mistakes. But this is not the same as saying that a true national commitment to educational reform will not require a significant redistribution of federal financial resources. If this US president, Congress, and state governors are serious about improving the schools, at some point they will have to "put their money where their mouths are." Why not now? Our students and their families can't wait any longer.

Educational Advocacy Groups

Association for Supervision and Curriculum Development, 250 North Pitt Street, Alexandria, VA 22314 703-549-9110 (curriculum and restructuring issues).

Children's Defense Fund, 122 C Street, NW, Washington, DC 20001202-628-8787 (family and community issues; published The State of America's Children 1991).

FairTest: National Center for Fair & Open Testing, 342 Broadway, Cambridge, MA 02139-1802. Tel. 617-864-1802. Fax 617-497-2224 (testing issues).

National Association for Bilingual Education (NABE), Union Center Plaza, 810 First Street, NE, Third Floor Washington, DC 20002-4205. Tel. 202-898-1929. Fax 202-289-8173.

National Association for the Education of Young Children (NAEYC), 1834 Connecticut Avenue, NW, Washington, DC 20009-5786. Tel. 202-232-8777. 800-424-2460 (family, curriculum and assessment, restructuring issues).

National Coalition of Advocates for Students (NCAS),100 Boylston Street, Suite 737, Boston, MA 02116. Tel. 617-357-8507. Fax 617-357-9549 (curriculum equity, restructuring and family issues; operates the National Center for Immigrant Students; published *The Good Common School*).

National Coalition for Parent Involvement in Education, National Education Association1,201 16th Street, NW, Washington, DC 20036 (family, restructuring issues).

Phi Delta Kappan, PO Box 789, Bloomington, IN 47402. Tel. 812-339-1156 (restructuring issues).

Rethinking Schools, 1001 East Keefe Avenue, Milwaukee, WI 53212. Tel. 414-964-9646 (restructuring issues, published *Rethinking Columbus*).

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*When Bush and the US Department of Education use the term "America," we understand them to refer to the United States.

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TESOL Statement on the Preparation of Primary and Secondary Teachers in the United States

All teachers working in K-12 education today face the challenge of responding to an increasingly diverse student population. This is especially true of those teachers who are responsible for the second language learning and academic achievement of language minority students.

Both ESOL and regular classroom teachers need special skills which prepare them to deal with language minority students in an academic setting. These skills may be learned through courses of study available through teacher preparation programs offered in colleges and universities, as well as through in-service education and professional development programs offered by school districts.

This means that teacher preparation and training programs operating at the college and university level must develop or refine presently offered programs in order to become more responsive to the needs of professionals who will be teaching language minority children in K-12 settings. Colleges and universities must structure programs of study so that ESOL teachers receive training which includes an emphasis on learning processes, child development, literacy development and methods of teaching content material to culturally and linguistically diverse students. Conversely, regular classroom teachers must participate in programs of study which include training on the nature of second language acquisition in an academic setting and language-sensitive content teaching methodologies.

In-service education or staff development should be designed with two types of teachers in mind: those who work as ESOL professionals, and those who work as regular classroom teachers, but who teach language minority children. By developing ESOL-based in-service which targets the needs of both groups of teachers, teaching skills may be enhanced and/or refreshed.

TESOL Statement on the Education of K-12 Language Minority Students in the United States

The population of ethnolinguistically diverse students in the primary and secondary schools of the United States has grown dramatically. So dramatically, in fact, that language minority students are for the first time the majority of students in many school districts. In order for the United States to take advantage of the great cultural and linguistic diversity brought by our language minority students to the United States and its schools, we must first recognize this diversity as a national resource.

We must also recognize, however, that students come from a variety of backgrounds and circumstances. Some are immigrants, some are refugees, while others are native born Americans of different language heritages. These students enter US schools with a variety of educational experiences. Some have received extensive formal education in their home countries and are on grade level in all content areas and in reading their first language. Others have had their edoucation delayed or interrupted and may be academically behind their peers in the U.S. and their countries of origin.

To meet the needs of such students, TESOL supports programs which promote students' growth in English language proficiency, enhance cognitive growth, facilitate academic achievement, and encourage cultural and social adjustment. Such programs include:

- comprehensive English as a Second Language instruction for linguistically diverse students which prepares them to handle content area material in English.
- instruction in the content areas which is academically challenging, but also is tailored to the linguistic proficiency, educational background and academic needs of students.
- opportunities for students to further develop and/or use their first language in order to promote academic and social development.
- professional development opportunities for both ESOL and other classroom teachers which prepare them to facilitate the language and academic growth of linguistically and culturally different children.

9/92

TESOL Standards: Ensuring Access to Quality Educational Experiences for Language Minority Students

Language minority students are those students who learned a language other than English as their first language. These students may be immigrants, refugees, or native born Americans. They may come to school with extensive formal education or they may be academically delayed or illiterate in their first language. Such students arrive at school with varying degrees of English proficiency. Some may not speak English at all; others may speak English, but need assistance in reading or writing English.

Whatever the case, it is clear that schools that hope to help these students meet the National Education Goals must provide special assistance to them. While the type of special assistance may vary from one district or school to another, all special assistance programs must give language minority students full access to the learning environment, the curriculum, special services and assessment in a meaningful way.

Teachers of English to Speakers of Other Languages (TESOL) offers the following standards of access to help schools judge the degree to which programs of special assistance are helping language minority students to meet the National Education Goals. The standards have been developed by the TESOL Task Force on the Education of Language Minority Students, K-12, in the US. They are based on the most current research on language learning in academic settings.

Access to a Positive Learning Environment

1. Are the schools attended by language minority students safe, attractive, and free of prejudice?
2. Is there evidence of a positive whole-school environment whose administrative and instructional policies and practices create a climate that is characterized by high expectations as well as linguistically and culturally appropriate learning experiences for language minority students?
3. Are teachers, administrators, and other staff specifically prepared to tailor instructional and other services to the needs of language minority students?
4. Does the school environment welcome and encourage parents of language minority students as at-home primary teachers of their children and as partners in the life of the school? Does the school inform and educate parents and others concerned with the education of language minority students? Does the school systematically and regularly seek input from parents on information and decisions that affect all critical aspects of the education of language minority students, their schools and school districts?

Access to Appropriate Curriculum

5. Do language minority students have access to special instructional programs that support the second language development necessary to participate in the full range of instructional services offered to majority students?
6. Does the core curriculum designed for all students include those aspects that promote (a) the sharing, valuing, and development of both first and second languages and cultures among all students and (b) the higher order thinking skills required for learning across the curriculum?
7. Do language minority students have access to the instructional programs and related services that identify, conduct and support programs for special populations in a district? Such programs include, but are not limited to, early childhood programs, special education programs, and gifted and talented programs, as well as programs for students with handicapping conditions or disabilities, migrant education programs, programs for recent immigrants, and programs designed for students with low levels of literacy or mathematical skills, such as Chapter 1.

Access to Full Delivery of Services

8. Are the teaching strategies and instructional practices used with language minority students developmentally appropriate, attuned to students' language proficiencies and cognitive levels, and culturally supportive and relevant?
9. Do students have opportunities to develop and use their first language to promote academic and social development?
10. Are nonclassroom services and support services (such as counseling, career guidance, and transportation) available to language minority students?
11. Do language minority students have equal access to computers, computer classes and other technologically advanced instructional assistance?
12. Does the school have institutional policies and procedures that are linguistically and culturally sensitive to the particular needs of language minority students and their communities?
13. Does the school offer regular, nonstereotypical opportunities for native English-speaking students and language minority students to share and value one another's languages and cultures?

Access to Equitable Assessment

14. Do language minority students have access to broadly based methods of assessing language and academic achievement in the content areas that are appropriate to students' developmental level, age, and level of oral and written language proficiency in the first and second languages? Are these measures nonbiased and relevant? Are the results of such assessments explained to the community from which the student comes in the language which that community uses?
15. Do language minority students have access to broadly based methods of assessing special needs? Again, access is further defined by using measures that are nonbiased and relevant, the results of which are explained to the community from which the student comes and in the language which that community uses.

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Age and Rate of Acquisition of Second Language for Academic Purposes

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The study reported in this article analyzed the length of time required for 1,548 advantaged limited English proficient (LEP) students to become proficient in English for academic purposes while receiving instruction in English in all subject areas. Variables included were age on arrival, English proficiency level upon arrival, basic literacy and math skills in the native language upon arrival, and number of years of schooling in English. Second language and content-area achievement were measured by students' performance on the Science Research Associates tests in reading, language arts, mathematics, science, and social studies. The results indicated that LEP students who entered the ESL program at ages 8-11 were the fastest achievers, requiring 2-5 years to reach the 50th percentile on national norms in all the subject areas tested. LEP students who entered the program at ages 5-7 were 1-3 years behind the performance level of their LEP peers who entered the program at ages 8-11, when both groups had the same length of residence. Arrivals at ages 12-15 experienced the greatest difficulty and were projected to require as much as 6-8 years to reach grade-level norms in academic achievement when schooled all in the second language. Whereas some groups may reach proficiency in some subjects in as little as 2 years, it is projected that at least 4-8 years may be required for all ages of LEP students to reach national grade-level norms of native speakers in all subject areas of language and academic achievement, as measured on standardized tests.

Acquiring a second language is never easy. Some people would like to think it is fairly simple for young children, but second language acquisition (SLA) researchers have documented a very complex process that occurs over a long period of time (McLaughlin, 1984). First language acquisition begins at birth and continues through at least age 12, with continuing acquisition of new vocabulary and subtleties of the language throughout our adult lives (de Villiers & de Villiers, 1979).

Second language is acquired to varying degrees of proficiency depending on the context in which the acquirer needs to use it. Immigrants of school age who must acquire a second language in the context of schooling need to develop full proficiency in all language domains (including the structures and semantics of phonetics, phonology, inflectional morphology, syntax, vocabulary, discourse, pragmatics, and paralinguistics) and all language skills (listening, speaking, reading, writing, and metalinguistic knowledge of the language) for use in all the content areas (language arts, mathematics, science, and social studies). Language used in school is sometimes unique to that context, and it becomes increasingly abstract as students move from one grade to the next. Language is the focus of every content-area task, with all meaning and all demonstration of knowledge expressed through oral and written forms of language.

Cummins (1979, 1980, 1981a, 1981b) proposed one of the first theoretical models for SLA that distinguished between two basic types of language proficiency. In early formulations of his theory, Cummins labeled these basic interpersonal communicative skills (BICS) and cognitive academic language proficiency (CALP). The use of these acronyms has been questioned by some researchers (see Cummins & Swain, 1983; Edelsky et al., 1983; Rivera, 1984) as possibly leading to misinterpretation of the complex concepts that they actually represent, but the terms have become symbolic and meaningful for many people in our field as a way of distinguishing between face-to-face conversational proficiency (BICS) and context-reduced, cognitively demanding aspects of language proficiency (CALP).

In context-embedded, face-to-face communication, meaning can be negotiated and is enhanced with a wide range of paralinguistic and situational cues. Context-reduced oral and written language, on the other hand, relies primarily on linguistic cues to meaning. Cummins (1981b) elaborates his conception of these terms by creating four quadrants which best illustrate the range of possibilities in the BICS and CALP distinction. The quadrants are divided by a horizontal continuum from context-embedded to context-reduced and by a vertical continuum from cognitively undemanding to cognitively demanding.

Language proficiency required for school tasks can incorporate the whole range of skills in all four quadrants, but it is especially in school that students need to develop context-reduced and cognitively demanding aspects of language in order to function successfully in the classroom. In his continuing refinement of the BICS/CALP distinction, Cummins (1984) defines CALP as aspects of language that involve cognitive processes at the higher levels of Bloom's taxonomy of educational objectives for the cognitive domain: analysis, synthesis, and evaluation (see Bloom & Krathwohl, 1977).

Analyzing rate of attainment of CALP in the second language, Cummins (1981a) found that whereas it generally takes students 2 years to master BICS in the L2, young children with little or no formal schooling in their L1 require approximately 5-7 years to reach the level of native speakers in CALP in the L2, as measured on standardized tests. Cummins (1981b) emphasizes that older children's common underlying proficiency in their first and second language assists with the process of SLA. Thus, for older students, many academic skills and concepts acquired in the L1 transfer to the L2, and the process of SLA occurs at a faster rate than for younger children.

Summaries of the literature on age and rate of attainment of the L2 (Krashen, Long, & Scarcella, 1979; Krashen, Scarcella, & Long, 1982) confirm that older children and adults initially acquire many aspects of the L2 faster than younger children. However, with acquisition of pronunciation and influence of the socioaffective filter (Dulay & Burt, 1978; Krashen, 1982), adults sometimes experience problems with SLA, so that overall, with time, younger acquirers tend to attain higher levels of proficiency in second languages than those who begin SLA as adults.

This study was designed to follow up Cummins's research and Krashen, Scarcella, and Long's literature synthesis on age variables, rate of attainment, and influence of L1 CALP development on the process of L2 CALP development. In this study, Cummins's theoretical framework was used as a basis for analysis of the type of L2 proficiency needed for academic purposes. The measures available for this study, however, were not tests that assessed all aspects of language proficiency.

The standardized tests required only the language skill of reading to be able to answer the questions. Metalinguistic knowledge of the language was assessed in the language arts test, and ability to classify, generalize, manipulate ideas, problem solve, and apply knowledge in each of the content areas was assessed in the reading, social studies, science, and mathematics tests. Measures used thus assessed some aspects of L2 CALP development as well as content-area achievement of students. Since Cummins's (1981a) data were based on 1,210 limited English proficient (LEP) students in Grades

K-9 in Canada, this study sought to extend the literature by analyzing 1,548 LEP students in Grades K-11 in a U.S. context.

METHOD

Sample and Setting

Cross-sectional data from 1977 to 1986 were gathered on language minority students attending a large U.S. public school system on the East Coast. At the time of the study, language minority students represented 11% of the total student population in this school district. Predominantly an affluent suburban area connected to a large metropolitan hub, the district also included a few pockets of low-income families. Almost all the language minority students in the district were relatively recent immigrants to the United States, with over 75 different languages and over 100 different countries represented.

Approximately 65% of the subset of language minority students who received special ESL instruction qualified for free or reduced-price lunches, indicating that upon entry, a majority of these students came from low-income families, as measured by U.S. standards. However, a large percentage of the immigrant families who settle in the district come from an upper or middle-income background in their country of origin, and they bring strong aspirations of upward mobility to their new home, with many achieving a more middle-class standard of living in the United States within the first 10-15 years of their arrival. Thus, the language minority population could best be categorized as lower to middle income, with strong middle-class aspirations.

In educational background, the large majority of language minority students in the district entered school at grade level, with parents having come from middle-class or upper class backgrounds in their home countries. In just the last 3 years, the district has experienced a small but increasing influx of language minority students with little or no formal schooling in their native language.

Subjects for this study, a total of 1,548 students, included all language minority students who were placed in beginning-level ESL classes upon entry and remained in the school system for several years. One subset of this population was not included in the study, those students who tested below grade level in L1 skills during placement testing upon entry, as well as older students with little or no formal schooling in L1.

This study was restricted to a group of LEP students with these particular characteristics for two reasons. First, it was assumed that an "advantaged" group of LEP immigrants, those with a middle- to upper class background in their home country and a strong educational background in their L1, would be more likely to reach the L2 proficiency and content-area achievement of native English speakers faster than LEP immigrants who had a lower class background or were below grade level in L1 skills. Second, since the amount of time required to reach L2 proficiency can vary significantly depending on level of English proficiency at which a student begins study all in English and level of formal schooling in the L1, it was decided to control for these two variables.

Assessment for controlled variables. Upon entry, a placement-testing procedure determined students' level of English proficiency and basic L1 literacy and math skills. After a placement staff member conducted an interview with the student and his or her parents or relatives, the student was given a locally developed placement test to measure listening, speaking, reading, and writing skills in English and ability to do math computation. The math tests in basic computation, decimals, and fractions were written using six of the major variations in world notations of math symbols. For measurement of basic literacy in the L1, the student was asked to read a short paragraph and to write a short language sample in the native language. The placement center staff had materials in each language to make a rough judgment that the student had had at least some minimal formal training in the L1. Bilingual staff were available to analyze in more depth Spanish, Vietnamese, and Korean language samples, which were among the largest minority language groups of the district.

A decision to place a student below grade level was based on ability to produce a short L1 writing sample and ability to perform math calculations at grade level for the student's age. A third criterion for grade placement was a student's transcripts, which would indicate interrupted or little formal schooling or very low grade point average. Placement staff had extensive references to conduct transcript analysis. Students were rarely placed more than one grade level below their age-appropriate grade.

Characteristics of sample chosen. Students in the advantaged LEP sample chosen for this study exhibited the following major characteristics upon arrival and entry into schooling all in English: (a) They were from over 100 different countries and spoke over 75 different languages, with no single language predominant, although Spanish, Korean, and Vietnamese speakers represented the largest language groups; (b) the students were of lower to middle-class background, as measured by U.S. economic standards, but they had strong middle-class aspirations and had come from middle- or upper class backgrounds in their home countries; (c) they had little or no proficiency in English; and (d) they were at or close to grade level in academic skills in their L1. In social class and educational background in their home country, these LEP students would be expected to have an advantage over their LEP peers who came from lower class backgrounds or those who had had interrupted or little formal schooling.

ESL program characteristics. In this school system, once each LEP student was tested and placed in the appropriate grade level, the student was given special assistance from ESL teachers, who provided English language arts instruction appropriately structured and sequenced to build a student's proficiency level in English. Since there were no self-contained ESL classes, students spent only part of their day with specialized ESL teachers and the rest of the day in the mainstream classroom. ESL staff assisted with the development of BICS in English, as well as with CALP development with some instruction in the content areas. A few ESL content-area classes (ESL algebra, ESL biology, etc.) were taught at the secondary level. Students did not receive any formal instruction in their L1 at school.

Students were taught by ESL staff until staff members felt they could function full-time in the mainstream. For exit from the ESL program, students were administered the California Achievement Test (CTB/McGraw-Hill, 1986), and ESL staff rated them on a locally developed scale focusing on students' development in English of oral comprehension, oral expression, reading and writing skills, and study habits. Most students were generally mainstreamed from the ESL program within 2-3 years of entry into the school system. Mainstreaming did not imply that the ESL staff believed that students had achieved CALP in English but that they were sufficiently far along in their growth in CALP skills in English to continue their development in a mainstream class.

Research Questions

1. How many years of schooling all in English are required for LEP students' achievement in reading, language arts, social studies, science, and mathematics to reach national average scores of native English speakers at each grade level?
2. How strongly does age on arrival of LEP students influence the rate of acquisition of cognitive academic second language proficiency and content-area achievement?

Data Collection and Analysis

Cross-sectional data from the years 1977-1986 for all students exited from the ESL program were collected to analyze age on arrival and rate of attainment of some aspects of CALP in English and content-area achievement. Dependent variables were scores for Grade Levels 4, 6, 8, and 11 on the Science Research Associates (SRA) Achievement Series (Science Research Associates, 1978) tests of reading, language arts, social studies, science, and mathematics. Testing was done only in English. Independent variables included age on arrival and number of years of schooling all in English, which for this sample was equivalent to length of residence in the United States. L1 literacy and math skills on arrival and English proficiency level on arrival were controlled variables.

School records, available on machine-readable media, were used to construct the data set. The initial data tape consisted of information on all LEP students who were placed in ESL, including their age on arrival, length of residence, sex, primary language, placement scores, and grade level in which they were initially placed. These records were checked for errors by running computer programs that noted unusual and obviously incorrect entries whose values exceeded the normal upper and lower bounds for that variable (e.g., an age of 25). In addition, the computer programs noted inconsistencies among the data for a particular student (e.g., a student of age 16 in Grade 2). These errors were manually corrected.

Files of SRA test data for Grades 4, 6, 8, and 11 were available from the years 1982-1986. Other files were available from 1977-1981, but since different forms of the SRA test were used in those years, the scores could not be compared with those from the new form. A set of relational data-base computer programs was employed to find test score matches from approximately 160,000 testing records for each of approximately 14,000 students who had registered for ESL classes. After only those students who entered at the beginning level of ESL proficiency and who were at grade level in L1 literacy and math skills had been selected and those students who had not remained in the school system had been eliminated, 1,548 LEP students remained in the data file with longitudinal records (4-6 years) of school performance.

With this data file, data sets were constructed consisting of all the students who had been tested in a given grade for a given number of years after ESL registration, resulting in a total of 17 different groups. Each of the 17 groups varied according to the three variables of length of residence, age on arrival, and grade level when the SRA test was taken. The variable of number of years of schooling all in English was defined by the following grouping of months: 12-23 months (labeled 1-2 years in the following figures), 24-35 months (2-3 years), 36-47 months (3-4 years), 48-59 months (4-5 years), and 60-71 months (5-6 years). The number of years of schooling all in English included time spent in the ESL program as well as time spent in the mainstream.

Among the 17 groups, there were no significant differences in educational background, in level of English proficiency upon arrival, or in proportional representation of sex and language background. Table 1 presents the general pattern of representation of sex and language background within the sample across the four grade levels tested.

TABLE 1

Percentage of Sample in Each Grade by Sex and Language Background

	Grade			
	4	6	8	11
		Language background		
Spanish	23	21	20	18
Vietnamese	17	20	19	20
Korean	16	21	27	24
Farsi	5	7	6	6
Chinese	5	3	4	7
Khmer	4	4	3	6
Lao	4	3	2	5
Urdu	3	3	4	2
Japanese	3	3	3	1
Arabic	3	2	1	2
Other	17	13	11	9
Total	100	100	100	100
		Sex		
Female	53	49	48	48
Male	47	51	52	52
Total	100	100	100	100

For each of these groups, the means and standard deviations of the scaled standard scores in the achievement test areas of reading, language arts, social studies, science, and mathematics were computed. In addition, confidence intervals for the means were calculated. The means are displayed in graphs for each subtest and for each grade tested (school system mean scores are also given).

The means were graphically represented by converting the mean standard scores into normal curve equivalents (NCEs), for appropriate interval-level scaling. NCEs are the appropriate equivalent of percentiles to use when displaying the results in graph form because a NCE is a conversion of the percentile into equal-interval data. Unlike percentiles, NCEs are preferred for statistical analysis because arithmetical operations can be performed only on equal-interval scales (Tallmadge, 1976).

The number of cases for each group ranged from 21 (for 3 out of 17 groups) to 151, or an average of 74 per group, providing a large enough number for testing for statistical significance in the differences between groups. The school system comparison group (which included both native speakers and ESL graduates) consisted of an average of 9,258 students each year for each grade level.

As a general guideline in this study, by computing confidence intervals, it was found that a difference between group means of 6-7 NCEs was sufficient for significance at the .05 level even in the smallest of groups. In some cases, group differences of 3-4 NCEs were significant at the .01 level. Because of the large number of groups to be compared (17 groups of LEP students, plus 4 groups of native speakers, times 5 subject areas, or 105 groups total), significance tests for each possible comparison were not performed due to the high probability of making Type I errors. Only important comparisons were made and are reported here.

RESULTS

Several fairly consistent patterns in scoring among the groups of ESL graduates emerged as analysis of the data was conducted. These patterns are reported by focusing on differences among groups by (a) length of residence, (b) age on arrival, (c) grade-level achievement (by grade when tested), and (d) subject-area achievement.

Length of Residence

For LEP students in this study, the number of years of their all-English schooling was equal to their length of residence in the United States. Results are reported using the term *length of residence* (LOR) to be consistent with other studies using similar variables.

For over half of the comparisons between groups by LOR, the more years of all-English schooling they had, the higher LEP students in the same grade scored on the SRA tests. The increase in scores that each group achieved with each additional year's LOR was very small and in most cases not statistically significant. However, in 15 out of 16 comparisons (with the exception of certain

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groups, to be discussed), groups with LOR of 4-5 years achieved 2-8 NCEs higher than groups with LOR of 1-2 years. In 10 out of 16 of these comparisons, groups scored at least 4 NCEs higher, a significant increase overall. Exceptions to this general pattern were 5-year-old arrivals tested in fourth grade, 6- and 7-year-old arrivals tested in sixth grade, 12-year-old arrivals tested in eighth grade, and mathematics achievement across all grades, which are all discussed in later sections.

Figures 1-4 illustrate ESL graduates' academic achievement on the SRA tests, comparing subject-area achievement by length of residence and age on arrival for each grade at which students were tested. Reported below each figure are school system means, ranging from the 59th to the 71st NCEs, with a mean of 64 NCEs for the school system across all subject areas and grades.

An example of the pattern of slightly higher achievement with each group's added year of LOR can be seen in Figure 1 in fourth graders' reading, language arts, and social studies scores, for students with LOR of 1-4 years. The 5-year-old arrivals, with LOR of 4-5 years, did not maintain the pattern and were a special case, to be discussed shortly. Fourth-grade LEP students scored at the 46th NCE in reading when first administered the SRA test at 1-2 years' LOR, and the group with 3-4 years' LOR had reached the 51st NCE, slightly above the national average. Social studies and language arts score comparisons between the same two LOR groups were higher by two NCEs (at the 52nd NCE in social studies and the 57th NCE in language arts), not a statistically significant difference.

Figure 2 illustrates sixth graders' scores, which demonstrate the pattern even more consistently in reading, language arts, science, and social studies achievement. The 6- and 7-year-old arrivals with LOR of 4-5 years and 5-6 years respectively did not maintain the pattern and are discussed shortly. The group in the sixth grade with LOR of 3-4 years increased their scores over the group with LOR of 1-2 years by 5 NCEs on the reading test (reaching the 51st NCE), 6 NCEs in language arts (at the 62nd NCE), 4 NCEs in social studies (at the 59th NCE), and 4 NCEs in science (at the 58th NCE).

Figure 3 illustrates a similar pattern for eighth graders, with the exception of the 12-year-old arrivals, another special case to be discussed later. In comparing the eighth-grade group with LOR of 2-3 years with the group with LOR of 4-5 years, test scores increased by 3 NCEs in reading (reaching the 47th NCE), 4 NCEs in language arts (at the 54th NCE), 6 NCEs in social studies (at the 58th NCE), and 3 NCEs in science (at the 51st NCE).

Figure 4 shows little difference among groups tested in the 11th grade with LOR of 1-2, 2-3, and 3-4 years, but students in the group with LOR of 4-5 years increased their scores significantly in comparison with those of 1-2 years' LOR, with an increase of 8 NCEs in reading (reaching the 31st NCE), 7 NCEs in language arts (at the 42nd NCE), 3 NCEs in social studies (at the 38th NCE), and 7 NCEs in science (at the 37th NCE).

When compared with national averages at the 50th NCE overall, LEP students with age on arrival below age 12 appeared to be making good progress within their first 2 years of all-English schooling. By the end of 2 years' LOR, all groups with age on arrival of 6-11 had reached at least the 50th NCE on the language arts, social studies, and mathematics tests. (Although only data for 8- and 10-year-old arrivals are shown in the figures for LOR of 1-2 years, this statement is based on the assumption that if the pattern of increases in scores remained consistent, 6-, 7-, 9-, and 11-year-old arrivals would also have reached the 50th percentile within 1-2 years.) The 6- to 11-year-old arrivals tested in the fourth and sixth grades had also reached the 50th NCE in science within their first 2 years' LOR, whereas those tested in eighth grade reached the 51st NCE by 4-5 years' LOR. On the reading test, those tested in fourth and sixth grades reached the 51st NCE at the end of 3-4 years' LOR, but those tested in eighth grade had only reached the 47th NCE after 4-5 years' LOR.

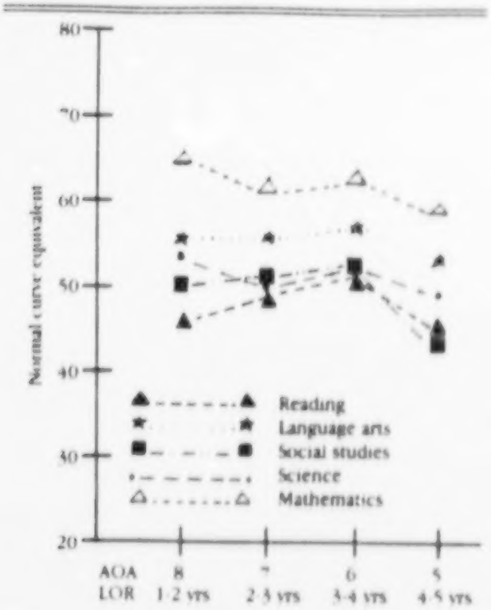
Although some groups of LEP students at all grade levels had reached the 50th NCE (the national average) on some subject-area tests within the 4-5 years measured in this study, when compared with the achievement levels of native speakers in their local school district, LEP students had not yet begun to reach the school system means across grade levels of 62-64 NCEs in reading, 62-64 NCEs in language arts, 60-65 NCEs in social studies, and 59-64 NCEs in science. They had, for the most part, met and excelled native speakers' achievement in mathematics, in which the school system mean ranged from 62 to 71 NCEs across all grade levels.

Age on Arrival

As can be seen in Figure 1, a gradual upward trend in scores for each group with an additional year's LOR was evident on the reading, language arts, and social studies tests. Only the 5-year-old arrivals, who had been in the U.S. longer than the other fourth-grade groups, did not achieve at a level expected for their length of residence. These students scored 6 NCEs lower on the reading test than the 6-year-old arrivals, who had 1 year less LOR, reaching only the 45th NCE, 4 NCEs lower in language arts at the 53rd NCE, 9

FIGURE 1

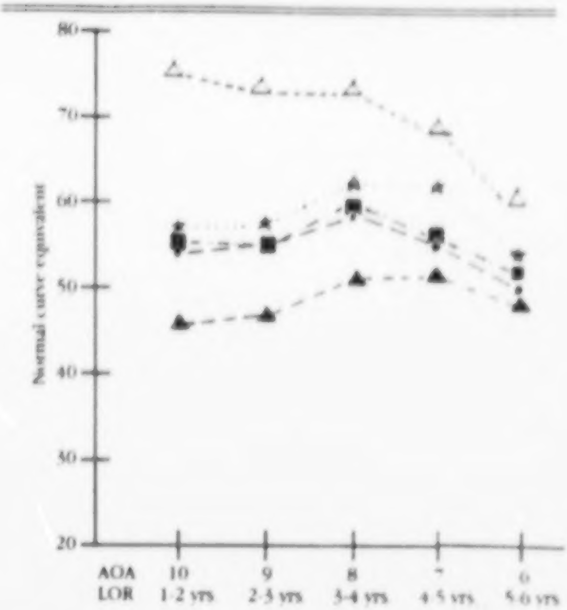
Age on Arrival (AOA), Length of Residence (LOR), and Subject-Area Achievement for 4th-Grade SRA Scores



Note School system means for 4th grade were as follows: reading—62, language arts—63, social studies—60, science—59, mathematics—62

FIGURE 2

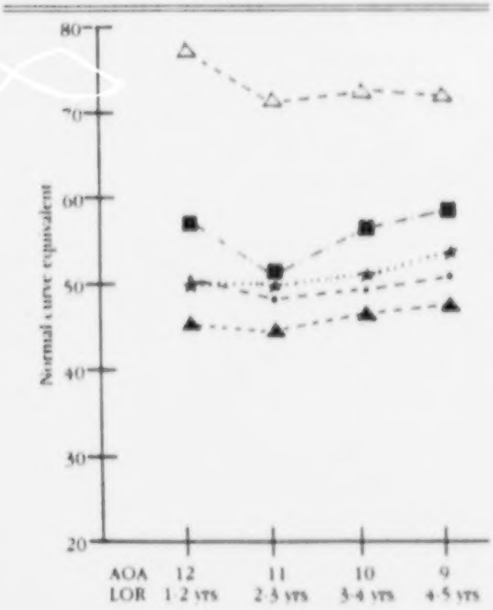
Age on Arrival (AOA), Length of Residence (LOR), and Subject-Area Achievement for 6th-Grade SRA Scores



Note School system means for 6th grade were as follows: reading—62, language arts—64, social studies—65, science—64, mathematics—70

FIGURE 3

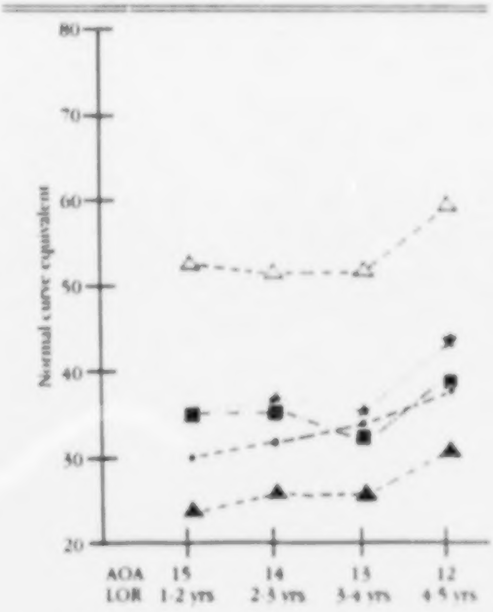
Age on Arrival (AOA), Length of Residence (LOR), and Subject-Area Achievement for 8th-Grade SRA Scores



Note School system means for 8th grade were as follows: reading—64, language arts—64, social studies—65, science—63, mathematics—71

FIGURE 4

Age on Arrival (AOA), Length of Residence (LOR), and Subject-Area Achievement for 11th-Grade SRA Scores



Note School system means for 11th grade were as follows: reading—64, language arts—62, social studies—60, science—61, mathematics—67

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NCEs lower in social studies at the 43rd NCE, 3 NCEs lower in science at the 49th NCE, and 4 NCEs lower in mathematics at the 59th NCE.

A similar pattern was found in the scores on the sixth-grade test for 6- and 7-year-old arrivals, who were also significantly below the appropriate performance level for their LOR (see Figure 2). Comparing 7-year-old arrivals with 8-year-old arrivals, who had 1 year less LOR, both groups reached the same level on reading (the 51st NCE) and language arts (the 62nd NCE). In social studies, the 7-year-old arrivals were 3 NCEs lower at the 56th NCE, in science 3 NCEs lower at the 55th NCE, and in mathematics 6 NCEs lower at the 68th NCE. Even more dramatic drops occurred in the scores of 6-year-old arrivals, who had 2 years more LOR than 8-year-old arrivals, with scores in reading 3 NCEs lower (at the 48th NCE), in language arts 8 NCEs lower (at the 54th NCE), in social studies 6 NCEs lower (at the 53rd NCE), in science 8 NCEs lower (at the 50th NCE), and in mathematics 14 NCEs lower (at the 60th NCE).

In the eighth grade (see Figure 3), 12-year-old arrivals with only 1-2 years' LOR achieved at a higher level than 11-year-old arrivals with 2-3 years' LOR. In reading, the 12-year-old arrivals achieved 1 NCE higher, not a significant difference. In language arts, the two groups reached the same level. Twelve-year-old arrivals' scores in social studies were 5 NCEs higher, in science 3 NCEs higher, and in mathematics 5 NCEs higher.

Grade-Level Achievement

Another consistent pattern in scores appeared in comparisons of achievement across grade levels. As can be seen in Figure 4, the 11th-grade LEP students' test scores were dramatically lower than LEP students' performance in 4th, 6th, and 8th grades (see Figures 1-3). The 11th graders tested after 1-2 years of English schooling scored from the 23rd to the 35th NCE on reading, language arts, social studies, and science. After 3-4 years, they had made meager progress as measured on the SRA. Finally, the group with 4-5 years' LOR increased their scores by 4-8 NCEs, in comparison with the group with 3-4 years' LOR, a significant increase. Eleventh-grade ESL graduates still appeared to need several more years of schooling in English beyond the 4-5 years measured here in order to reach native-speaker levels (50th NCE nationwide and 60th-64th NCE for the local district).

Math achievement of ESL graduates in the 11th grade was much higher than 11th-grade achievement in other subject areas, reaching above national averages (53rd-59th NCEs) but still lower than 4th-, 6th-, and 8th-grade LEP students' math achievement. The 11th-grade school system mean in mathematics was at the 67th NCE.

Subject-Area Achievement

When comparing subject-area performance, Figures 1-4 illustrate high mathematics achievement, with LEP students scoring 3-6 NCEs above native speakers even in their first 2 years of all-English schooling, with the exception of 11th graders, who scored 14 NCEs below the school system mean. Scores in mathematics generally did not vary significantly across groups in each grade level, remaining basically at the same high level of achievement with each additional year of LOR. Exceptions were the 5-year-old arrivals' drops in scores on the 4th-grade test, 6- and 7-year-old arrivals' drops in scores on the 6th-grade test, 12-year-old arrivals' better performance in comparison with the other 8th-grade groups, and the increased achievement of the group in 11th grade with LOR of 4-5 years. All groups with age on arrival of 8-11 years scored above the school system mean in mathematics, regardless of LOR.

Whereas mathematics represented ESL graduates' highest performance, their lowest scores were in reading. Reading and language arts were the two subject areas directly focused on testing knowledge of L2. Performance in these two areas differed significantly, with students scoring from 5-11 NCEs higher on the language arts test, which measured punctuation, grammar, and spelling. Differences in performance among the social studies, science, and language arts tests were not for the most part significant.

DISCUSSION

Age on Arrival: 5-7

The data in this study on younger arrivals (ages 5-7) appear to support Cummins's threshold hypothesis (1976) and his interdependence hypothesis (1981b), which describes the "common underlying proficiency" of a student's two languages: "To the extent that instruction in Lx is effective in promoting proficiency in Lx, transfer of this proficiency to Ly will occur provided there is adequate exposure to Ly (either in school or environment) and adequate motivation to learn L2" (p. 29). Cummins argues that *common underlying proficiency makes possible the transfer of cognitive academic proficiency from one language to another.* He suggests that there must be some minimal literacy development in the L1 for cognitive development to transfer readily to the L2 and that this minimal "threshold" level significantly aids the process of CALP development in the L2.

The data in this study suggest that this threshold involves a minimum of 2 years of L1 schooling for students' most rapid progress in CALP development in the L2. Among first through eighth graders here for several years, only arrivals at age 5 who were tested in fourth grade and arrivals at ages 6 and 7 who were tested in sixth grade did not achieve at a rate equal to arrivals at ages 8-11, when both groups had the same LOR.

Conservatively assuming at least a minimal increase of 1 NCE for each additional year of LOR, the 5-year-old arrivals tested in fourth grade scored significantly below their predicted level of achievement, at 7 NCEs below their predicted score on reading, 5 NCEs below on language arts, 10 NCEs below on social studies, 4 NCEs below on science, and 5 NCEs below on mathematics, or an average, on all subject-area tests combined, of 6 NCEs below expected levels of performance for their LOR. Using the same measure, 6-year-old arrivals tested in the sixth grade were 5, 10, 8, 10, and 16 NCEs below their predicted scores, or an average of 10 NCEs below. Similarly, 7-year-old arrivals tested in the sixth grade were 1, 1, 4, 4, and 7 NCEs below their predicted scores, or an average of 3 NCEs below expected levels of performance for their LOR.

These 5-, 6-, and 7-year-old arrivals received the least amount of L1 schooling in comparison with all other older arrivals in the study. This was the only known variable that differentiated them from older LEP arrivals. One might question why the students who took the 4th-grade test and who had an age on arrival of 6 or 7 years did not seem to experience the same lower levels of achievement of the 6th-grade test takers whose age on arrival was 6 or 7 years. However, it is important to remember that the test at each succeeding grade level becomes cognitively more complex. Apparent lags in mastery of the content areas become more visible in the upper grades. This is especially evident in the data from the 11th-grade test.

Age on Arrival: 12-15

At first glance, the data in this study on adolescent arrivals (ages 12-15) appear to contradict Cummins's (1981b) interdependence hypothesis, which predicts that "older learners who are more cognitively mature and whose L1 proficiency is better developed would acquire cognitively demanding aspects of L2 proficiency more rapidly than younger learners" (p. 29). Even with a strong academic background in their L1, students in this study who arrived in 7th grade at age 12 and were tested 4 years later in 11th grade were substantially below national norms in achievement in all subject areas except mathematics.

In this researcher's opinion, however, these dramatic drops in adolescents' scores cannot automatically be attributed to the critical period hypothesis (Lenneberg, 1967), or, to use Oyama's (1976) term, the sensitive period hypothesis. Instead, the major difference in academic performance may be a result of the schools' greater demands on students at the secondary level and the limited length of time LEP secondary students have to reach those levels. The 8th-grade and 11th-grade versions of the SRA differ dramatically, and these differences are strongly reflected in the high school curriculum. In this study, 12-year-old arrivals taking the 8th-grade SRA test were scoring around the 50th NCE after just 2 years' schooling in English, whereas 12-year-old arrivals taking the 11th-grade SRA test after 5 years' schooling in English had only reached the 31st NCE in reading, 42nd NCE in language arts, 38th NCE in social studies, 37th NCE in science, and 59th NCE in mathematics.

It must be kept in mind that these LEP students were not being provided with any L1 content instruction to help them continue cognitive and academic subject mastery at grade level while they were acquiring beginning levels of BICS and CALP in English. By the time they had acquired enough proficiency in English to receive meaningful instruction in content-area classes, they had in the meantime lost 2-3 years of CALP development and content knowledge in mathematics, science, and social studies at their age-grade level. This put them significantly behind in mastery of the complex material required for high school students. Between their third and fourth years of schooling all in English, they began to increase their achievement levels, but even projecting this increased rate (an average of 6 NCEs per year), it might require 6-8 years' LOR for them to reach national averages of native-speaker achievement across all the subject areas. Cummins et al. (1984)

discuss this possibility in summarizing the literature on older versus younger arrivals:

> The findings of Cummins [1981a] suggest that the effects of LOR tend to diminish after 5 years and thus, in terms of immigrant students' ability to approach grade norms in L2 academic skills, there may be a critical age on arrival at about age 12, after which it will become increasingly difficult for students to catch up. (p. 79)

Another confirmation of the significant amount of L1 transfer of content knowledge to L2 and the difficulty of losing time in academic development while acquiring L2 was evident in the scoring pattern among eighth-grade test takers. Twelve-year-old arrivals with only 1-2 years' LOR performed significantly better on the science, social studies, and mathematics tests than 11-year-old arrivals with 2-3 years' LOR. The loss of content-area instruction while 11-year-old arrivals were acquiring English appeared to lower their scores, whereas the 12-year-old arrivals had the advantage of an additional year of L1 content instruction to apply to their L2 content knowledge.

In a reexamination of the data that support Cummins's hypotheses, a number of the studies focusing on the development of CALP-related skills that contrast younger arrivals with older arrivals define older students as 8-12 years of age (see, for example, Burstall, 1975; Cummins et al., 1984; Ekstrand, 1976; Ervin-Tripp, 1974; Grinder, Otomo, & Toyota, 1962; Skutnabb-Kangas & Toukomaa, 1976). This study provides further confirmation for the hypothesis that the fastest attainment of the second language for academic purposes occurs among those whose age on arrival is 8-11 years, when these students are schooled only in the L2 after arrival.

Other studies comparing younger arrivals to teenage or adult arrivals generally focus on the earliest stages of language acquisition and on BICS-related skills (see, for example, Asher & Garcia, 1969; Asher & Price, 1967; Ekstrand, 1978; Olson & Samuels, 1973; Oyama, 1976, 1978; Patkowski, 1980; Seliger, Krashen, & Ladefoged, 1975; Snow & Hoefnagel-Höhle, 1977; Stern, 1967). Although these studies show *initial* faster gains in BICS among teenage and adult arrivals (as summarized by Krashen et al., 1979), few of these studies look at student gains across time.

Two studies examining CALP gains across time (Cummins, 1981a; Snow & Hoefnagle-Höhle, 1978) appear to support faster L2 development among 12- to 15-year-old students, but both studies used the same language measures across all ages and examined absolute gains. The present study, however, focused on tests that change with each grade level, with scaled standard scores used to compare one age with another. The SRA test reflects appropriate age-grade cognitive and academic development across time. None of the studies cited above measured *academic* gains over time in language, social studies, science, and mathematics, as did this study. A more detailed analysis of the literature on age and time variables in second language acquisition is provided in Collier (1987).

This study, therefore, supports a new hypothesis that older students who arrive at ages 12-15 experience the greatest difficulty with acquisition of the L2 for academic purposes, combined with continuing content-area development, when these students are schooled only in the L2. Such students in Grades 7-12 cannot easily afford even 1 or 2 years' loss of cognitive and academic development in all subject areas while they are mastering English. The study data suggest that secondary-level students are most in need of content-area classes taught in the L1, in order for them to stay at grade level while they are mastering English. Another alternative might be the development of accelerated content-area classes for very advanced ESL students, covering 2-3 years' academic work in 1-2 years. Content-area ESL classes taught at students' level of English proficiency should also be developed for students in the early years of ESL.

Age on Arrival: 8-11

Given that the 5-year-old arrivals performed less well than their peers in 4th grade, that the 6- and 7-year-old arrivals did less well than their peers in 6th grade, and that the 12- to 15-year-old arrivals tested in 11th grade achieved significantly lower than the national average even after 4-5 years of all-English schooling, then it would appear that the 8- to 11-year-old arrivals experienced the shortest length of time for reaching the aspects of CALP development in the L2 measured by the SRA tests.

These students had reached at least the 50th NCE in language arts, social studies, and mathematics within their first 2 years of all-English schooling. In science, the 4th- and 6th-grade test takers made it to the 53rd and 54th NCEs in just 2 years, but it took 4-5 years for the 8th-grade test takers to reach the 51st NCE. In reading, the one test focused on a pragmatic measure of language proficiency, all the 4th- and 6th-grade test takers made it to the 51st NCE after 3-4 years' LOR, but those taking the 8th-grade reading test had only reached the 47th NCE after 4-5 years' LOR. Again, it must be remembered that the tests at each succeeding level become cognitively more complex.

Although this is a remarkable accomplishment, these advantaged LEP students with a middle-class background and adequate education in their L1 have high expectations of competing with native speakers for university admission and thus need to score higher than the 50th NCE on tests focused on language. Achievement attained by native speakers in the school district, at a mean of 64 NCEs across all subject areas, would require 3-4 more years of continuing CALP development and subject knowledge in the L2, projecting the present pattern of 8- to 11-year-old arrivals' increases made each year.

Reading and Language Arts

ESL graduates' better performance on the language arts test in comparison with the reading test was indicative of the different aspects of language that the two tests measured. The language arts test measured the more mechanical, easily taught aspects of language – grammar, spelling, and punctuation. These test items provided a measure of metalinguistic knowledge about the language, from a discrete-point, language-testing perspective (Lado, 1961).

The reading test, on the other hand, included a vocabulary test of synonyms and antonyms as well as questions following reading comprehension passages. The subject matter of these passages ranged from topics taken from content areas, to consumer skills such as newspaper editorials or advertisements, to literature. In contrast to the discrete-point focus of the language arts test, test items on the reading test were much more pragmatic (Oller, 1979), measuring a wide range of language domains through a reading passage that set an age-appropriate context for the questions that followed.

The reading test also assessed thinking skills and was more closely related to the acquisition end of the acquisition-learning continuum (Krashen, 1981). On the SRA reading test, the types of items used to measure vocabulary development and reading comprehension required the use of more complex cognitive processes, at the upper levels of Bloom's taxonomy (see Bloom & Krathwohl, 1977). Such processes appear to take longer to master in L2 CALP development than the mechanics of language measured in the very limited SRA language arts test. The content of the SRA reading test was also more closely related to the content presented in language subtests of standardized tests for university admission and thus might serve as a more appropriate predictor of these LEP students' future performance on standardized language tests.

Mathematics

It is encouraging that advantaged LEP students can perform so well in mathematics, even when portions of the exam include math concepts and problem solving, which rely more heavily on language skills. Although the remarkably high mathematics achievement was the exception to other content-area achievement, ESL graduates' scores still followed the same pattern as that found in the other four content-area tests. The 5-year-old arrivals tested in 4th grade and the 6- and 7-year-old arrivals tested in 6th grade achieved significantly below their peers who had been in the United States for a shorter time. Likewise, the ESL graduates' 11th-grade achievement in mathematics was still considerably below ESL graduates' 4th-, 6th-, and 8th-grade achievement in mathematics.

CONCLUSIONS AND IMPLICATIONS

Across all subject areas tested and all grade levels combined, LEP students in this study arriving between the ages of 8 and 11 were the fastest achievers. Seven-year-old arrivals were slightly below this performance, with an average of 3 NCEs below projected scores for their LOR. LEP students arriving at ages 5 and 6 were projected to require at least 2-3 more years' LOR to reach the 8- to 11-year-old arrivals' performance level. LEP students arriving between the ages of 12 and 15 were the lowest achievers, not having reached national average scores in any subject area except mathematics after 4-5 years' LOR. They were projected to need at least another 2-3 years to reach the 50th NCE on all subject-area tests.

The data imply that 5-, 6-, and 7-year-old arrivals might acquire English for academic purposes more rapidly if they were provided a minimum of 2 years of continuing cognitive academic development in the L1. Arrivals at ages 12 to 15 cannot afford to lose time in academic instruction in the content areas taught at grade level. These subjects might be taught either through the L1 or through intensive courses taught in the L2 when students are sufficiently proficient in English to be able to work at grade level. It clearly takes a long time to acquire CALP and attain appropriate levels of academic achievement in the L2 in all the subject areas. Depending on age of arrival, it may take these advantaged LEP students anywhere from 4-8 years or more to reach the 50th NCE on standardized tests across all the subject areas. It will take them even longer to reach native speakers' attainment in their own school district.

It should not be assumed from this study that standardized, multiple-choice tests are an adequate measure of CALP. These SRA tests measure only very limited aspects of the whole range of language proficiency. For instance, they do not measure listening comprehension, oral production, writing skills, strategic reasoning, initiative, creativity, or many pragmatic aspects of language. Moreover, students' anxiety on a timed test can greatly limit their ability to demonstrate what they know. Standardized tests have many other limitations as well.

Nevertheless, as long as these tests are used in the mainstream as a significant measure of academic achievement for students to move from one level to the next or to be selected for special academic programs, we in ESL and bilingual education need to use such tests to assess our students' ability to achieve in the mainstream. These findings show that there is no shortcut to the development of cognitive academic second language proficiency and to academic achievement in the second language. It is a process that takes a long, long time.

We plan to continue analyzing this extensive data base for additional findings. Scores from future years of testing will be added, and a time-series study will be undertaken to track each ESL graduate. New independent variables will be added in order to analyze differences in educational background, sociocultural variables, and many other factors that may influence student achievement and second language acquisition. ■

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How Long? A Synthesis of Research on Academic Achievement in a Second Language

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To expand the current theoretical base in second language acquisition, this article proposes nine generalizations on optimal age, L1 cognitive development, and L2 academic achievement. These generalizations summarize the author's and others' research on second language acquisition for schooling purposes. In this synthesis, relationships among the following variables are considered: first language acquisition, second language acquisition, student age at the time of exposure to a second language, academic achievement (as measured by standardized tests in all subject areas), membership in a language majority or language minority community, and language(s) of instruction in school. The five new generalizations presented at the end of the article, which are based on research on academic achievement in a second language, merit additional research to validate and refine them.

How long does it take to master a second language for schooling? Is it easier to acquire that language when one is younger or older? What level of proficiency in first and second languages is needed to succeed academically in a second language? How long does it take to reach the level of average performance by native speakers in all academic subjects in the second language? This research synthesis addresses these questions.

For many years, educators have focused on the acquisition of English as the primary goal of special programs for limited English proficient (LEP) students. We have assumed that the development of English proficiency would result in our students' eventual attainment of the academic skills needed to succeed in school in a second language, at levels comparable to native English speakers. Yet we have conducted very little basic research that addresses variables that might influence this process, such as the length of time and the level of L2 proficiency required to achieve academic success in a second language.

Hakuta and Snow (1986) distinguish between basic research, which analyzes the linguistic, psychological, sociological, and cultural processes in human development, and evaluation research, which typically compares educational program models or teaching methods to examine their effectiveness. This synthesis of research includes studies from both basic research and evaluation research that explore how long it takes students studying in a second language to reach the level of average academic achievement by native speakers on standardized tests of reading, language arts, mathematics, science, and social studies. The synthesis includes an analysis of the influence of several important variables on academic achievement, such as first and second language acquisition, student age at the time of initial exposure to a second language, membership in a language majority or language minority community, and the language(s) of instruction in school.

AGE OF INITIAL SECOND LANGUAGE ACQUISITION

It is widely believed that young children are the fastest, most efficient acquirers of a second language. Language researchers dispute this common assumption but continue to debate the optimal age for beginning second language acquisition. However, increasing research evidence indicates that the age question cannot be separated from another key variable in second language acquisition: cognitive development and proficiency in the first language.

First language acquisition is not a quick and easy process; it takes a minimum of 12 years (McLaughlin, 1984; de Villiers & de Villiers, 1978). From birth through age 5, children acquire enormous amounts of L1 phonology, vocabulary, grammar, semantics, and pragmatics, but the process is not at all complete by the time children reach school age. From ages 6 to 12, children still have to develop in the first language the complex skills of reading and writing, in addition to continuing acquisition of more complex rules of morphology and syntax, elaboration of speech acts, expansion of vocabulary (which continues throughout a person's lifetime), semantic development, and even some aspects of phonological development (McLaughlin, 1984; de Villiers & de Villiers, 1978). For school purposes, language acquisition also must include the vocabulary and special uses of language for each subject area, such as metalinguistic analysis of language in language arts classes and many other learning strategies associated with the use of language in each content area (Chamot & O'Malley, 1987; Heath, 1986).

Second language acquisition research has found that this process of L1 development has a significant influence on the development of L2 proficiency. One important finding is that the lack of continuing L1 cognitive development during second language acquisition may lead to lowered proficiency levels in the second language and in cognitive academic growth. Lambert (1984) refers to this as subtractive bilingualism; Cummins (1981b) describes this in terms of a lower threshold level in the first language, or limited bilingualism, with which negative cognitive effects are associated. Several research reviews have identified groups of students experiencing some negative cognitive effects of subtractive or limited bilingualism (e.g., Cummins, 1981b, 1984; Dulay & Burt, 1980; Duncan & De Avila, 1979; Skutnabb-Kangas, 1981).

When the debate about the optimal age for beginning acquisition of a second language for schooling purposes takes this important intervening variable—L1 cognitive development—into account, the arguments can be resolved fairly conclusively. Before puberty, it does not matter when one begins exposure to (or instruction in) a second language, as long as cognitive development in the first language continues up through age 12 (the age by which first language acquisition is largely completed). Cummins (1981b) refers to a common underlying proficiency, or interdependence, existing between a bilingual's two languages (even given widely varying surface features), with development of one language strongly aiding development of the second one. To see how this interdependence works, let us now examine research on the age question that addresses preschool children and school-age children.

Preschool Children

Many studies have examined simultaneous development of two languages in children from birth. (For syntheses or collections of these studies, see Hakuta, 1986; Hatch, 1978; McLaughlin, 1984.) All of these studies reveal that children go through a process similar to L1 acquisition, with initial mixing of the two languages followed by a fairly rapid sorting out of the two linguistic systems, between ages 3 and 5. When cognitive development takes place in each language, it is frequently stimulated by parents who work hard to raise the children bilingually. Preschool children who begin second language acquisition any time between ages 3 and 5 (successive bilinguals) are not at any disadvantage as long as they continue to develop their first language at the same time that they are acquiring the second language.

If simultaneous and successive bilinguals continue cognitive development in both languages throughout the elementary-school years, they frequently outperform monolinguals on measures of cognitive flexibility, linguistic and metalinguistic abilities, concept formation, divergent thinking skills, creativity, and diversity (see, for example, De Avila & Duncan, 1980; Diaz, 1983; Hakuta, 1986).

School-Age Children

The language needed for school is unique and very complex. In the past, school personnel have frequently oversimplified the language acquisition process, assuming that a child who carries on a conversation, sounding just like a native speaker, is completely proficient in the second language. We now know that the type of language needed for school includes not only all the domains of language (phonetics, phonology, inflectional morphology, syntax, vocabulary, discourse, pragmatics, and paralinguistics—including both structure and semantics), with all four language skills (listening, speaking, reading, and writing) to be mastered in each domain, but also use of all of these domains and skills within each subject area to be mastered (language arts, mathematics, science, social studies; see Collier, 1989).

Language in school becomes increasingly complex and less connected to contextual clues as students move from one grade level to the next. Language becomes the focus of every content-area task, with all meaning and all demonstration of knowledge expressed through the oral and written forms of language. Cummins and Swain (1986) describe context-reduced, cognitively demanding school language as especially difficult to master. Yet by fourth grade, most uses of language in school fall into this category. This review addresses, first, the acquisition of basic L2 skills and, second, the acquisition by nonnatives of the more cognitively complex school language.

Basic second language skills (survival language). The earliest studies addressing age differences focused on pronunciation, a cognitively undemanding task. The findings of these studies are very consistent: After 3 to 5 years of exposure to a second language, the large majority of subjects who begin second language acquisition after puberty retain a foreign accent, whereas children initiating second language acquisition before puberty retain little or no foreign accent (e.g., Asher & Garcia, 1969; Fathman, 1975; Oyama, 1976; Seliger, Krashen, & Ladefoged, 1975; Tahta, Wood, & Loewenthal, 1981; Williams, 1979).

Lenneberg (1967) believes that older acquirers' difficulty in achieving a native-like pronunciation is due to loss of cerebral plasticity by puberty. In an extensive synthesis of studies on this topic, Long (1988) confirms the existence of maturational constraints on second language acquisition but asserts that much more research needs to be conducted in this area. Although the reasons for older acquirers' difficulty with acquisition of L2 pronunciation are debated by language researchers, the phenomenon clearly exists and is often cited as a rationale for beginning second language acquisition prior to puberty, if at all possible.

With regard to the role of age in the acquisition of other oral skills needed for basic communication, studies have found that in the initial stages, older children and adults proceed through syntactic and morphological development faster than younger children. However, after 2 to 3 years, children beginning second language acquisition before puberty achieve higher proficiency levels than individuals beginning as adolescents or adults (see Krashen, Scarcella, & Long, 1982, for a synthesis of these studies). Thus, in the long run, prepubertal children are the best acquirers of the basic L2 skills needed for interpersonal communication.

This phenomenon of older children and adults being more efficient L2 acquirers in the early stages confuses most people. A common assumption is that "young children pick up a second language so fast." What is not often taken into account by the layperson is the vast difference in the level of language complexity expected for each age. Children's second language acquisition *appears* superior largely because the structures and vocabulary they need for adequate communication are so much simpler than those required of adults. In addition, children at age 6 have not yet begun to complete full cognitive development in their first language. Young children can be outperformed by older subjects on similar tasks in the second language because of the latter group's greater cognitive maturity and the knowledge or life experience that transfers from the first to the second language. This is even more clearly demonstrated in the following summary of studies focusing on acquisition of context-reduced, cognitively demanding aspects of oral and written school language.

Context-reduced and cognitively demanding school language. A number of researchers have compared the performance of subjects of different ages on language tasks associated with school skills. The short-term studies once again show initial advantages among the older subjects, but a new phenomenon emerges here. When examining optimum age for beginning second language acquisition, most studies of both short-term and long-term gains have found that students initiating second language acquisition between the ages of 8 and 12 are faster in early acquisition of L2 skills; in addition, over several years' time, they maintain a greater cognitive advantage over younger children initiating second language acquisition at 4 to 7 years of age.

Two measures are frequently used in reporting findings on second language acquisition by immigrants. Age on arrival (AOA) refers to the age at which an individual entered the country in which the second language is spoken. It also marks the age at which the immigrant's exposure to the second language began, as well as the age that schooling in the second language for part or all of each school day began. Length of residence (LOR) is defined as number of months or years of L2 exposure, both inside and outside the formal classroom.

Among the short-term studies, Ekstrand (1976) tested 2,189 immigrants to Sweden with a LOR of 2 years and an AOA of 6 to 14, using measures of listening comprehension, pronunciation, free oral production, reading comprehension, dictation, and free written production. He found that older students performed better than younger students on all measures. Ervin-Tripp (1974) tested English speakers' acquisition of French in Switzerland during their first 9 months of exposure. On measures of comprehension, imitation, taped natural conversation, diary writing, and translation, the 7- to 9-year-olds were superior in syntax, morphology, and pronunciation to the 4- to 6-year-olds. Examining foreign language learning in an elementary school in Japan, Grinder, Otomo, and Toyota (1962) found that in comparison with second graders, fourth graders excelled in vocabulary development, listening comprehension, and, in some instances, pronunciation after 1 year of study.

Snow and Hoefnagel-Höhle (1978) examined English speakers representing a wide range of ages who were acquiring Dutch in Holland. They grouped subjects into five age groups: 3- to 5-year-olds, 6 to 7, 8 to 10, 12 to 15, and adults. Subjects were tested during their first 6 months of exposure to Dutch, at 10 months, and at 14 to 15 months. Testing was limited to oral measures of language, including pronunciation, auditory discrimination, morphology, sentence repetition, sentence translation, sentence judgment, story comprehension, and the Peabody Picture Vocabulary Test. At the first testing (LOR of 6 months), the adults and the 12- to 15-year-olds performed better on all measures. By the third test (LOR of 14 to 15 months), the adults' progress had slowed considerably, and the 8- to 10-year-old and 12- to 15-year-old groups had surpassed all others. The 3- to 5-year-olds were consistently the worst performers on all measures, thus confirming findings of other short-term studies that older students outperform younger students. (It should be noted, however, that measures used in the study were the same across all ages. When age-appropriate measures are used, the results are different, as is seen in the studies reviewed in the section on adolescents in the second half of this article.)

Among the long-term studies, Burstall (1975), who examined foreign language learning in the elementary school, found that 16-year-old speakers of English introduced to French at age 8 were only slightly ahead of 16-year-old students who had started studying French at age 11 when both groups were tested on measures of listening, speaking, reading, and writing.

Similarly, Lapkin, Swain, Kamin, and Hanna (1980) discovered (much to their surprise) that 10th-grade students from late French immersion programs, who had accumulated 1,400 hours of instruction in French, achieved scores on tests in oral and written skills in French roughly equivalent to 10th-grade students from early immersion programs, who had accumulated 4,000 hours of French instruction. The group with 1,400 hours of French had had 20 to 40 minutes per day of French as a second language instruction in elementary school and immersion in academic instruction in French in 7th and 8th grades. The group with 4,000 hours of French had had their French immersion experience in kindergarten and 1st grade, with academic instruction in English beginning in Grade 3 and academic course work in both English and French throughout the rest of their schooling.

Other studies of late immersion have found that only those students who have had sufficient preparation in French in Grades K through 6 are able to achieve in the second language on a par with the early immersion students (Cummins & Swain, 1986). Genesee (1978) concludes that older students are efficient L2 learners in late French immersion programs because their ability to abstract, classify, and generalize in the first language may aid in second language acquisition for academic purposes.

After seeing this consistent, emerging pattern among almost all the studies on age variation in second language acquisition for school purposes, Cummins (1981a) chose to reexamine the data from one study (Ramsey & Wright, 1974) that seemed to contradict the findings of other studies. Ramsey and Wright had concluded that students with an AOA of 6 to 7 were more advantaged in L2 development than older learners. Cummins undertook this reanalysis because LOR was not included as a variable in the Ramsey and Wright study.

Cummins (1981a) found that LOR was a significant variable on all tests of oral and written skills. Students being schooled only in the second language who were tested in the fifth, seventh, and ninth grades were found to require a LOR of 5 to 7 years to reach the grade mean for native speakers in language skills needed for school. In comparing the number of correct answers on a given set of test items across various ages of subjects, Cummins found, as had previous researchers, that older students performed better than younger learners because they were more cognitively mature. This difference was lessened, however, when younger and older students were compared using norms appropriate to their age and grade. In addition, Cummins found that the effects of LOR and AOA variables seem to diminish with time, especially after a LOR of 5 years.

In this same study, Cummins found that immigrants took approximately 2 to 3 years to reach proficiency in basic communicative skills in English, or context-embedded, cognitively undemanding aspects of language. School personnel frequently assume that proficiency in this type of language is all that is needed to succeed in school. Yet proficiency in basic L2 skills does not correlate highly with the type of language needed for context-reduced, cognitively demanding language tasks, as measured on standardized tests; nor does proficiency in basic skills correlate highly with informal measures designed to test the thinking skills and more abstract thought required in the upper elementary grades and secondary school (Collier, 1987; Collier & Thomas, 1988; Gottlieb, 1985; Saville-Troike, 1984). In contrast to the 2 to 3 years needed to reach proficiency in basic L2 skills, Cummins found that a period of 5 to 7 years of study in the second language is required to reach native-speaker levels in school language.

In another study, Cummins et al. (1984) examined age differences and the influence of L1 development on L2 school language development. Japanese students in Canada in Grades 2, 3, 5, and 6, as well as Vietnamese students aged 9 to 17, were tested on measures of English vocabulary, reading, prepositional usage, and sentence repetition and were given oral interviews. On measures of L2 school skills, older students performed significantly better, whereas younger students outperformed older students on context-embedded measures, or basic skills in English. Multiple regression analyses of both Japanese and Vietnamese students' scores revealed that development of L1 school language accounted for a highly significant proportion of the variance in L2 school language.

In his theoretical framework, Cummins (1978) explains that older students' better L2 performance in academic settings is strongly related to the development of L1 school skills. His interdependence hypothesis predicts that the development of L2 school language is partially dependent upon the prior level of development of L1 school language. Cummins asserts that there is a common underlying proficiency that makes possible the transfer of school skills across a student's two languages.

Generalizations on the Optimal Age for Acquisition of a Second Language

At this point, we can make the following generalizations about the relationships among first language acquisition, second language acquisition, and student age at the time of initial exposure to a second language:

1. Before puberty, it does not matter for overall long-term academic achievement when one is initially exposed to (or first receives instruction in) the second language, as long as L1 cognitive development is continued through age 12 (the age by which first language acquisition is largely completed).
2. When children's L1 development is discontinued before it is completed, they may experience negative cognitive effects in L2 development; conversely, children who have reached full cognitive development in two languages enjoy cognitive advantages over monolinguals.
3. At the beginning stages of second language acquisition, adults and adolescents with solid L1 development master basic interpersonal communicative skills faster than children. After 2 to 3 years of L2 exposure, however, children achieve higher L2 proficiency in basic interpersonal communicative skills, with adults and adolescents typically retaining an accent.
4. Older children (ages 8 to 12) who have had several years of L1 schooling are the most efficient acquirers of L2 school language. Adolescents with solid L1 schooling are equally efficient acquirers of L2 school language, except for pronunciation.

ACADEMIC ACHIEVEMENT AND SCHOOL LANGUAGE

Up to this point, this synthesis of research has focused on the development of L2 proficiency, as influenced by age and L1 proficiency. Now let us consider the key question of academic achievement in a second language.

Academic achievement may be measured in a variety of ways: by teacher-made tests in each subject area studied; by grade point average in all subjects; by student performance on tests designed by a school district to measure attainment of the objectives of the local curriculum; or by standardized tests designed to compare the performance of one group of students with that of all students in the United States. To make direct comparisons from one study to another, we must use standardized test scores, since they are the only measure providing a normative standard. However, it must be kept in mind that standardized tests are extremely limited measures of language proficiency, in that they measure only one language skill, reading, and do not test the student's ability to use the language for any spoken or written communicative function. Nevertheless, standardized tests can provide a measure of students' abilities to think in the language and to demonstrate content knowledge.

Basic Research on Academic Achievement in a Second Language

Very few basic research studies have addressed the question of the length of time required for L2 students to reach the level of average academic achievement by native speakers. Cummins (1981a) examined the length of time needed for immigrants to acquire school language when schooled exclusively in the second language after arrival. His study examined the achievement of 1,200 Canadian immigrants in Grades 5, 7, and 9. Measures did not include all the content areas but focused on school language as measured through standardized tests. Cummins found that it took LEP students 5 to 7 years to reach native-speaker norms at the 50th percentile or 50th normal curve equivalent (NCE). Number of years of L1 schooling was not included as a variable.

Collier (1987) and Collier and Thomas (1988) conducted two studies analyzing the length of time required for 2,014 immigrants, whose schooling was exclusively in English after arrival in the United States, to reach native-speaker norms on standardized achievement tests in reading, language arts, mathematics, science, and social studies. AOA ranged from 4 to 16 years and LOR from 2 to 6 years. Over 75 different languages were represented in the sample, which included 65% Asians and 20% Hispanics. To control the important variables of L1 schooling and socioeconomic status, only those students who were at grade level in the first language when they entered the United States and who were from a middle- or upper middle-class background were included. The studies were also limited to those students with no previous exposure to the English language prior to their arrival in the United States.

Results of the studies showed that those students below age 12 who had had at least 2 years of formal schooling in their first language before arriving in the United States reached the 50th percentile or 50th NCE on the reading, language arts, science, and social studies tests in 5 to 7 years. Clear evidence of transfer of content knowledge in mathematics from first to second language was demonstrated by students' high achievement on math scores, reaching the 64th to 73rd NCE (or 75th to 86th percentile) after only 2 years of study in English (2 years' LOR).

In contrast, young students who had arrived between the ages of 4 and 6 and had had little or no schooling in their first language had not reached the 50th percentile or 50th NCE within the first 6 years of LOR and were projected to reach it in 7 to 10 years at their demonstrated rate of progress. Those students who arrived at ages 12 to 16 also scored dramatically lower than students with an AOA of 8 to 11. After 6 years of schooling all in the second language, they had reached the 50th percentile or 50th NCE only on the standardized test in mathematics. On the 11th-grade test, the older students, after 6 years' LOR, had reached only the 31st NCE (18th percentile) in reading, the 42nd NCE (35th percentile) in language arts, the 38th NCE (28th percentile) in social studies, and the 37th NCE (27th percentile) in science. At this rate of progress, they would be unable to score at the 50th percentile or 50th NCE before graduating from high school.

From this point on, NCEs are reported rather than percentiles because they represent a conversion of percentiles into equal-interval data and thus a more appropriate measure for analysis. Unlike percentiles, NCEs are preferred for statistical analysis because arithmetical operations can be performed only on equal-interval scales.

Young children. Collier's (1987) and Collier and Thomas's (1988) findings on young children with little or no L1 schooling provide more research evidence for the interdependence of the two languages and for the importance of continuing cognitive development in the first language, including L1 literacy, for more efficient acquisition of the second language. When schooled exclusively in the second language, children who arrive at ages 4 to 7 may need 1 to 5 more years to reach the same levels of academic achievement as older LEP children who have had some L1 schooling.

Collier's (1987) and Collier and Thomas's (1988) findings, along with those of Cummins (1981a), provide evidence that L2 proficiency and academic achievement do not occur quickly; rather, they involve a developmental process that takes a much longer time than school personnel have previously assumed. All three studies found that when schooled exclusively in the second language, students require a minimum of 5 years to reach the 50th NCE on standardized tests; this is true even for the most advantaged students, that is, those who have a strong educational background and who come from a middle- or upper middle-class background.

Adolescents. The findings on adolescents past puberty in the Collier (1987) and Collier and Thomas (1988) studies were the biggest surprise. Adolescents with good cognitive development in the first language, such as the adolescents in these studies, reach high levels of proficiency in basic L2 skills in 2 to 3 years, with the possible exception of native-like pronunciation. However, during this period of acquisition of the second language, these students received no assistance with continuing content-area achievement, except for sitting in mainstream classes in which they could not understand the language of instruction. As a result, their academic achievement lagged behind that of native English-speaking peers. It appears that secondary students cannot afford the loss of 2 to 3 years of academic instruction while they are mastering basic L2 skills, if their expectations are to compete successfully with native speakers who plan to pursue a university degree.

Herein lies the fallacy in the assumption by educators that once adolescents have acquired basic L2 skills, they will be able to do well in school. In secondary school, the level of cognitive complexity and sequential content knowledge needed for each subject is extremely dependent on prior knowledge. If academic work in the first language is not continued at home or at school while secondary students are acquiring the second language, there may not be enough time left in high school to make up the lost years of academic instruction.

Three studies examining adolescents' second language acquisition, cited earlier in this article, found these older L2 acquirers to be the fastest in comparison with younger children. However, two of the studies (Ekstrand, 1976; Snow & Hoefnagel-Höhle, 1978) were short-term, measuring basic L2 skills during the first 2 years of L2 study, and focused on measuring absolute gains in the second language, with approximately the same language measures given to all ages. Yet adolescents and older children typically show faster absolute gains in the early stages. In contrast, Collier (1987) and Collier and Thomas (1988) examined students' long-term L2 and content-area achievement using standardized measures that varied for each age and grade level, increasing appropriately in cognitive complexity with each age group. Early gains seen in 8th-grade scores were not evident by 11th grade, with adolescents needing as many years (7 to 10) as the youngest children who had had no L1 schooling.

The third study that found adolescents to be among the best L2 acquirers (Lapkin et al., 1980) measured long-term academic achievement among students whose academic instruction was never interrupted. These adolescents had actually begun L2 study during their elementary-school years, prior to puberty. While they were acquiring basic skills in French (L2) during their elementary-school years, they received all academic instruction in English (L1), keeping up to grade level. By the time they began academic immersion in the second language in seventh grade, they had developed sufficient L2 proficiency to continue uninterrupted academic development.

From an examination of these few studies in basic research, it is apparent that an important key to successful second language acquisition *and* academic achievement by adolescents may be uninterrupted academic instruction during the acquisition of basic L2 skills. To examine this question further, let us turn to some evaluation research that examines long-term academic achievement in a second language.

Evaluation Research on Academic Achievement in a Second Language

Other studies that report on the L2 development and content-area achievement of L2 acquirers can be classified as program evaluations. Hundreds of evaluations of U.S. programs have been conducted, although results are relatively inaccessible to the public. This review is limited to published longitudinal evaluations from around the world that have reported findings in sufficient detail to allow for comparisons of student achievement.

These evaluation findings typically report results on two types of standardized measures of the second language—reading and language arts tests. For the purposes of this synthesis, reading scores are considered to be a more valid predictor of L2 thinking skills than language arts scores. A standardized language arts test typically measures the easily taught aspects of language: punctuation, capitalization, spelling, and simple grammar points. In contrast, a reading test usually measures, through reading comprehension passages and vocabulary analysis, the ability to think in the language. Most of the school districts investigated report that students reach the 50th NCE on a standardized language arts test 2 to 4 years earlier than they reach the 50th NCE on the reading test. For this reason, a reading test is a better predictor of students' academic performance in the second language at the secondary and postsecondary levels.

Schooling in two languages for language minority students. Each of the evaluations reviewed in this section used a comparison group being schooled only in the second language; in each case, the experimental group was being schooled bilingually. Each found that the comparison group typically performed better in the first (and sometimes second) year of schooling when both groups were tested in the second language and that subsequently the two groups performed roughly equally. Then, in the fourth or fifth (or sometimes sixth) year, the students in the bilingual program made dramatic gains, whereas the comparison group remained significantly below grade level. L1 instruction throughout the elementary school years, coupled with gradual introduction of the second language, seems to produce a consistent pattern of greater academic achievement in the second language at the end of 4 to 7 years of schooling, even though the total number of hours of instruction in the second language may be dramatically smaller when compared with schooling in the second language only.

Gale, McClay, Christie, and Harris (1981) reported the results of a longitudinal evaluation of an Australian bilingual program. Aboriginal students taught in their native language and in English for all grades performed significantly better on 10 different oral and written measures of English after 7 years of schooling than did aboriginal students schooled only in English. Although students in the bilingual program had not yet reached national norms in the seventh year, L1 cognitive development appeared to aid their academic achievement significantly.

In another study, Malherbe (1978) found that students in South Africa being schooled in Afrikaans and in English experienced an initial lag in mastery of academic subjects when English was introduced. However, this lag disappeared by the end of Grade 6, when students reached grade-level norms on all tests in English.

Skutnabb-Kangas (1979) found that Finnish 9- to 11-year-old arrivals to Sweden, with several years of L1 schooling, achieved at significantly higher levels than Finnish students with an AOA of 6 to 8 years who had had little or no L1 schooling. In another study reported by Skutnabb-Kangas, Finnish children being schooled in a bilingual program in Sweden that permitted L1 cognitive academic development through Grade 6 were able to achieve at grade level when tested in Swedish in the sixth grade.

In the United States, McConnell and Kendall (1987) found that by Grade 5, immigrants to the state of Washington participating in a bilingual program were scoring at or above the 50th NCE in mathematics, vocabulary, and English reading. Plante (1977) reported that Hispanic students from low-income families who were participating in a Connecticut bilingual program were at or above national norms in English and mathematics by the end of

Grade 3, whereas a comparison group receiving instruction only in English performed significantly less well than the students in the bilingual program.

Tempes et al. (1984) reported that Hispanic students in several bilingual programs in California had reached national norms in English reading by fifth or sixth grade and in mathematics by third or fourth grade. In general, these programs began literacy and content-area instruction in the first language; literacy instruction in the second language was introduced in third grade, and content-area instruction in both languages continued throughout the elementary-school years.

Krashen and Biber (1988) present additional data on bilingual programs in four other California school districts that report similar findings. On standardized tests, Hispanic students from low-income families were able to reach the 50th NCE by sixth grade in reading in English and by third grade in mathematics when tested in English. Two school districts whose Hispanic students traditionally scored extremely low were able, with the addition of L1 cognitive academic development materials to the curriculum, to bring their scores in English up to the 44th and 48th NCEs in reading and mathematics, respectively, by fifth grade.

Troike (1978) reported that students in a French-English bilingual program in Minnesota were at or above national norms in all content areas by the end of 5 years of schooling in both languages and that Hispanic students in a bilingual program in New Mexico reached national norms in mathematics by the end of fourth grade and in English reading by the end of fifth grade. Medina and Valenzuela de la Garza (1987) reported that Mexican American students in four bilingual elementary schools in Arizona were scoring above national norms on the California Achievement Test at the end of third grade on all subject-area tests.

Vorih and Rosier (1978), in an investigation of Navajo students in Arizona, found that those in a bilingual program reached national norms by sixth grade but that those being schooled only in English (L2) performed substantially below the experimental group. In a longitudinal study, Medina, Saldate, and Mishra (1985) reported that Hispanic students who had attended a maintenance bilingual program at the elementary-school level in Arizona were still achieving at or above national norms in mathematics and in English reading in the 12th grade.

The research findings reported in this section support the view that it takes 4 to 7 years of dual-language cognitive academic development for academic gains to be clearly seen but that once those gains are achieved, students being schooled in both languages are much more academically successful than their peers being schooled only in the second language. However, very little research has been conducted on the academic achievement of students from dual-language programs at the secondary level.

ESL programs for language minority students. Very few ESL program evaluations have been reported. A few studies of short-term gains have been summarized by Long (1983), who found that special L2 instruction does improve, to some degree, students' performance on L2 tests, compared with that of students who have "natural" exposure to the language without special L2 instruction. However, there is a strong need for further research in this area.

Collier (1987) and Collier and Thomas (1988) have reported on the L2 academic achievement of ESL students over a 6-year period, but in these studies there were no comparison groups receiving only natural L2 exposure or bilingual instruction. The Collier and Thomas studies did not evaluate the ESL program, since complete data were not available on the exact length of time that each student remained in ESL classes. Most students received 1 to 2 hours of ESL instruction daily for 1 to 2 years and were immersed in the mainstream for the rest of their classes. Thus, these studies provide an analysis of how students perform when they are immersed in the second language in school with a small amount of ESL pullout instruction. In this situation, it took the 8- to 11-year-old arrivals 5 to 7 years to reach the 50th NCE on all the standardized tests combined, and it was projected that the 4- to 7-year-old and adolescent arrivals would take 7 to 10 years to reach the 50th NCE.

Saville-Troike (1984) followed 19 children, ages 7 to 12, through their first year of English (L2) acquisition, examining their achievement on many measures of oral and written English and academic performance in all subject areas. She found that the two major factors that correlated significantly with their L2 academic achievement were development of English vocabulary and opportunity for continuing cognitive development in the native language with peers and adults.

Gersten and Woodward (1985) summarized two evaluations of structured ESL immersion programs. In this type of program model, which provides instruction only in English, materials are designed for student mastery of minute structures, taught on a sequential, step-by-step basis. In one program, Hispanic students were taught all in English using highly structured DISTAR materials for language and mathematics lessons in Grades K through 3. After 4 years in this program, students scored slightly above national norms on language arts, at the 47th NCE on mathematics, and at the

39th NCE on reading. In the second structured immersion program, 16 Asian students placed in a special class reached the 58th NCE in reading and mathematics 5 years after entry into the program, but this was not a sufficient number of students for the findings to be generalizable.

In summary, there is a great need for more studies on the long-term achievement of students being schooled entirely in the second language. It may take as long as 7 to 10 years for nonnative speakers to reach the average level of performance by native speakers on standardized tests, as found in the Collier (1987) and Collier and Thomas (1988) studies. In the bilingual program evaluations, comparison groups of students being schooled exclusively in the second language typically never reach the 50th NCE.

Schooling in two languages for language majority students. Other school evaluations that provide additional insights into the question of how long it takes to master a second language for schooling are evaluations of Canadian immersion programs. From these evaluations, extensive published data are available on the academic achievement of language majority students in kindergarten through Grade 12. Reviews of this research can be found in Cummins and Swain (1986), Genesee (1987), Larter and Cheng (1984), and Swain and Lapkin (1981).

Among the variations in immersion models, early total immersion is the most widely implemented. This model typically provides all instruction in the second language (the minority language) for the first 2 years of schooling (kindergarten and first grade). Beginning in second or third grade, students receive one hour of L1 language arts instruction; generally by fourth grade, 50% of the curriculum is taught in the first language and 50% in the second language. At the secondary level, 60% of the instruction is in the first language and 40% in the second language.

Evaluations of early total immersion programs have typically found that by the end of Grade 5, students reach national norms in tests in both languages in all subject areas and that they continue to achieve above national norms throughout the rest of their schooling. Once the first language is introduced into the curriculum, students reach national norms within a year on L1 standardized mathematics and reading tests (Swain & Lapkin, 1981).

In early partial immersion, in which balanced instruction in both languages is provided for kindergarten through Grade 12, students' achievement sometimes lags behind that of early total immersion students, although the differences disappear by sixth or seventh grade. One explanation for this is that the introduction of literacy training simultaneously in two languages causes confusion for students, and it takes them longer to sort out the two language systems (Cummins & Swain, 1986).

Late immersion students begin their immersion experience in Grades 7 or 8. Those who have had L2 instruction for 20 to 40 minutes daily from kindergarten through Grade 6 are sufficiently proficient in the second language so that their academic achievement does not suffer when they are totally immersed in L2 instruction. However, those who have had only 1 or 2 years of prior L2 instruction lag somewhat in their academic achievement while they are taught only through the second language. Students who undergo only 1 year of late immersion appear to do well at first but do not sustain their L2 achievement as they continue through high school. As noted earlier, late immersion students who have had sufficient L2 preparation prior to the immersion experience perform as well as early total immersion students in measures of L2 proficiency, even though they have had approximately one fourth the number of hours of L2 instruction. Overall, however, early total immersion students generally outperform students in all other types of immersion programs on attitudinal measures and on measures of academic achievement throughout their schooling (Genesee, 1987).

Generalizations on Academic Achievement in a Second Language

The research reviewed in the second half of this article, on the length of time that it takes to become proficient in a second language for schooling purposes and to reach native-speaker norms in academic achievement, leads to additional generalizations on the relationships among the following variables: first language acquisition, second language acquisition, student age at the time of exposure to a second language, academic achievement (as measured by standardized tests in all subject areas), membership in a language majority or language minority community, and languages of instruction in school.

1. When students are schooled in two languages, with solid cognitive academic instruction provided in both the first and second languages, both language minority and language majority students generally take from 4 to 7 years to reach national norms on standardized tests in reading, social studies, and science (measures of thinking skills), whereas their performance may reach national norms in as little as 2 years in L1 and L2 tests in mathematics and language arts (the latter testing spelling, punctuation, and simple grammar points). Social class background

does not appear to make a significant difference in academic achievement in a dual-language program.

2. Immigrants arriving at ages 8 to 12, with at least 2 years of L1 schooling in their home country, take 5 to 7 years to reach the level of average performance by native speakers on L2 standardized tests in reading, social studies, and science when they are schooled exclusively in the second language after arrival in the host country. Their performance may reach national norms in as little as 2 years in mathematics and language arts.
3. Young arrivals with no schooling in their first language in either their home country or the host country may take even longer to reach the level of average performance by native speakers on L2 standardized tests: possibly as long as 7 to 10 years in reading, social studies, and science, or indeed, never. Very little longitudinal research has been conducted in this area, however.
4. Adolescent arrivals who have had no L2 exposure and who are not able to continue academic work in their first language while they are acquiring their second language do not have enough time left in high school to make up the lost years of academic instruction. Without special assistance, these students may never reach the 50th NCE or may drop out before completing high school. This is true both for adolescents with a good academic background and for those whose schooling has been limited or interrupted.
5. Consistent, uninterrupted cognitive academic development in all subjects throughout students' schooling is more important than the number of hours of L2 instruction for successful academic achievement in a second language.

These generalizations represent new syntheses of common patterns in research findings on academic achievement in a second language. Researchers are encouraged to conduct additional studies to validate and further refine these generalizations.

In both basic and evaluation research, many more studies need to be conducted that examine all ages of students acquiring a second language for schooling. Evaluation studies reported in this synthesis represent those that were published and gave sufficient information on method in order to provide some valid measures for purposes of cross-study comparisons. To date, most comparisons of student achievement in schools are given using national norms of standardized tests. These tests are not the best measures of second language proficiency, and in the future, it is hoped that researchers may find other measures for comparisons of academic achievement in a second language. Much still remains to be done to understand the variables that influence academic achievement in a second language.

■

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A Conceptual Framework for the Integration of Language and Content in Second/Foreign Language Instruction

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This article proposes a conceptual framework for the integration of language and content teaching in second and foreign language classrooms. In this model, language and content teachers work collaboratively to determine language-teaching objectives. These objectives derive from two considerations: (a) content-obligatory language (language essential to an understanding of content material) and (b) content-compatible language (language that can be taught naturally within the context of a particular subject matter and that students require additional practice with). The conceptual framework is illustrated in four instructional settings—the mainstream class, the ESL class, the foreign language immersion class, and the FLES (Foreign Language in the Elementary School) class. General implications for the integration of language and content teaching are also discussed.

There is growing interest in a model of language education that integrates language and content instruction in the second/foreign language classroom. This approach contrasts with many existing methods, in which language skills are taught in isolation from substantive content. Several theoretical rationales underlie this shift in perspective.

For young children, cognitive development and language development go hand in hand; language is a tool through which the child comes to understand the world. In first language acquisition, these processes are paired naturally. For children who are L2 learners, however, traditional methods for teaching second/foreign languages often dissociate language learning from cognitive or academic development. In contrast, an integrated approach brings these domains together in instruction.

A second rationale behind integrating language and content teaching is that language is learned most effectively for communication in meaningful, purposeful social and academic contexts. In real life, people use language to talk about what they know and what they want to know more about, not to talk about language itself. What school children know and need to know more about is the subject matter of school. In the typical school setting, however, language learning and content learning are often treated as independent processes. Mohan (1986) notes: "In subject matter learning we overlook the role of language as a medium of learning. In language learning we overlook the fact that content is being communicated" (p. 1). Cantoni-Harvey (1987) further underscores this point: "When the learners' second language is both the object and medium of instruction, the content of each lesson must be taught simultaneously with the linguistic skills necessary for understanding it" (p. 22).

Another underlying rationale is that the integration of content with language instruction provides a substantive basis for language teaching and learning. Content can provide both a motivational and a cognitive basis for language learning. Content provides a primary motivational incentive for language learning insofar as it is interesting and of some value to the learner and therefore worth learning. Language then will be learned because it provides access to content, and language learning may even become incidental to learning about the content (e.g., in immersion classes).

Content also provides a cognitive basis for language learning in that it provides real meaning that is an inherent feature of naturalistic language learning. Meaning provides conceptual or cognitive hangers on which language functions and structures can be hung. In the absence of real meaning, language structures and functions are likely to be learned as abstractions devoid of conceptual or communicative value. If these motivational and cognitive bases are to be realized, then content must be chosen that is important and interesting to the learner. In the case of language learning in school, the focus of our concern here, this is achieved by selecting content that is part of the mainstream curriculum.

A fourth rationale concerns the intrinsic characteristics of language variation. It is increasingly recognized that language use in school differs in some important general ways from language use outside of school and, moreover, that different subject areas are characterized by specific genres or registers (see Heath, 1983; Wells, 1981). Thus, learning the school register or specific subject-area registers may be a prerequisite to mastery of specific content or to academic development in general. This is of particular concern to teachers of limited English proficient (LEP) students.

What is called for in the model proposed here is a recognition of the importance of language structures, skills, or functions that are characteristic of different content areas. These skills can be identified by (a) informed speculation about what kinds of language skills or functions are called for in specific content areas, (b) informal observation of the language requirements of specific content areas, or (c) systematic analysis of students' actual language needs in content classes. In contrast to mainstream content classes, where the teacher assumes students have the requisite language skills, an integrated content class does not make such assumptions. The primary objective of such classes remains content mastery, but it is recognized that content classes have great language-teaching potential as well.

There are several other reasons for the shift from teaching language alone to content-based approaches. The success of immersion as a model of foreign language education has provided strong evidence for the effectiveness of language learning through subject-matter learning. Extensive research has revealed that immersion students learn the academic content specified in the school curriculum and at the same time develop significant levels of foreign language proficiency (Genesee, 1987; Lambert & Tucker, 1972). Furthermore, concern for the education of language minority students in the United States has prompted a reexamination of the methodologies appropriate for teaching English to LEP students in the public schools.

Cummins's (1980, 1981) work provided theoretical impetus for considering the integration of language and content instruction. He posited a paradigm in which language tasks may be characterized as context reduced or context embedded and in which the tasks addressed through language may be cognitively demanding or undemanding. In context-embedded language tasks, support for meaning is readily available through the immediate communicative situation, whether through background knowledge or through visual or other contextual cues. In contrast, context-reduced tasks offer little available contextual support for the learner to derive meaning from the immediate communicative setting.

However, as language teachers try to make language meaningful by providing contextual cues and supports, too often their attempts bring the learner into cognitively undemanding situations. Thus, although it is easy for children to learn to label colors and shapes, for example, activities in the language class rarely require students to use this new language knowledge in the application of higher order thinking.

In contrast, when language and content are integrated, it is possible to practice language (e.g., colors and shapes) by applying such labels to more sophisticated tasks, such as sorting geometric shapes by those that differ from one another by one attribute (color or shape only) or by two attributes (color and shape). More recently, Chamot and O'Malley (1987) have developed the Cognitive Academic Language Learning Approach (CALLA), which provides academic language development in English through content-area instruction in science, mathematics, and social studies. CALLA attempts to ease the LEP student's transition from ESL classes to mainstream classes.

For these reasons, then, content-based language instruction is receiving increasing attention in second/foreign language teaching circles. Yet, if such an orientation is to be effective, language teaching must be carefully considered and planned. It is unlikely that desired levels of second/foreign language proficiency will emerge simply from the teaching of content through a second or foreign language. The specification of language-learning objectives must be undertaken with deliberate, systematic planning and coordination of the language and content curricula.

THE CONCEPTUAL FRAMEWORK

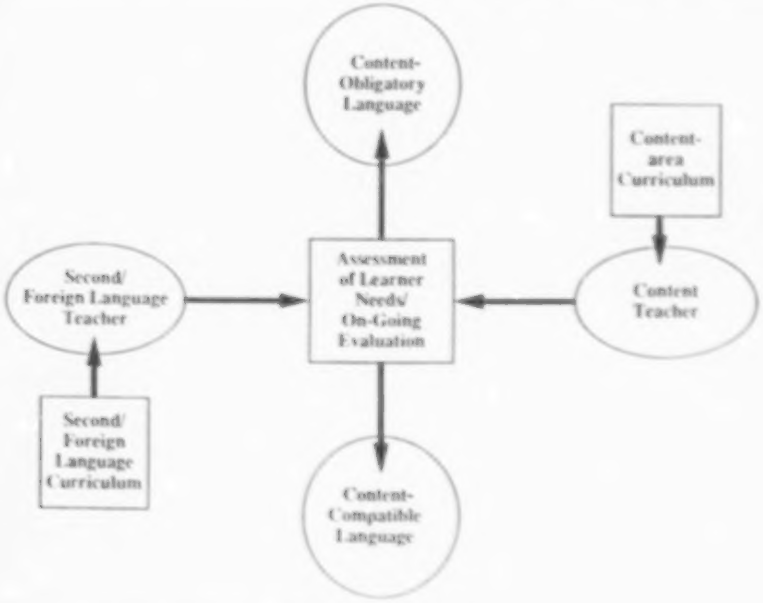
Consider the following two scenarios. Scenario 1: The French FLES (Foreign Language in the Elementary School) teacher dashes into Mr. Porter's fifth-grade class to teach a 20-minute lesson on weather terms—a lesson completely devoid of any connection to what the class is doing that day or week in its other subjects. Scenario 2: The chemistry teacher at Hoover High School asks her students to write up the steps in the laboratory experiment just conducted, without ever considering that LEP students may not know the vocabulary or rhetorical mode for describing a process. In these scenarios, both teachers have their respective priorities and perceived responsibilities: The content teacher is responsible for subject matter; the language teacher is responsible for the language curriculum. In the traditional model, the teachers' responsibilities do not overlap.

In this article, we propose an alternative model that calls for a reconceptualization of the roles of teachers working in schools where second/foreign language education is a primary goal. In this model, the language and content teachers maintain their respective priorities. However, their areas of responsibility are expanded so that by working in tandem, they will be able to maximize the language development of second/foreign language learners.

According to the model, language-learning objectives in a content-based program are derived from three sources: (a) the second/foreign language curriculum, (b) the content-area curriculum, and (c) assessment of the learners' academic and communicative needs and ongoing evaluation of their developing language skills. From these sources, two types of language objectives can be specified: content-obligatory language objectives and content-compatible language objectives. This conceptual framework is displayed graphically in Figure 1.

FIGURE 1

The Conceptual Framework for Integrating Language and Content Instruction


Content-Obligatory Language
Content-area Curriculum
Second/Foreign Language Teacher
Assessment of Learner Needs/On-Going Evaluation
Content Teacher
Second/Foreign Language Curriculum
Content-Compatible Language

Content-obligatory language objectives specify the language required for students to develop, master, and communicate about a given content material. For every topic or concept, certain language is essential or obligatory for understanding and talking about the material. Content-obligatory language objectives are both structural (i.e., specification of verbs, nouns, rhetorical devices, etc.) and functional (e.g., study skills such as note taking; language functions such as requesting/giving information, narrating, persuading, etc.). For instance, a lesson on gravity in a fourth-grade science class would require that students know the vocabulary *to rise*, *to pull*, and *force*; similarly, a math lesson on measurement would require students to know the vocabulary for systems of measurement, whether inches and feet, or metric terms.

These examples may seem rather obvious, but needs assessment to determine the essential vocabulary, structures, and so on is typically not part of the curriculum-planning process in the public schools. By working as a team, the content and language teachers can pool their respective expertise: The content teacher knows the key concepts to be imparted, and the language teacher knows how to teach the pertinent language skills.

For content-compatible language objectives, the content teacher and the language teacher ask, What other language skills are compatible with the concept or information to be taught? Content-compatible language objectives *can* be taught within the context of a given content but are *not required* for successful content mastery. Whereas content-obligatory objectives derive directly from the linguistic needs for communicating the information in the content area, content-compatible language objectives derive from the second/foreign language curriculum and ongoing assessment of learner needs and progress.

Traditionally, second/foreign language curricula have been fairly standard both in content and sequencing. Learners acquire vocabulary related to classroom procedures, the weather, parts of the body, colors, and numbers, to name some typical topics taught early on in the language-learning sequence. The present tense is taught before the past; agreement of number and gender precedes indirect object pronouns. These topics and structures may or may not have any relationship to the language skills students need in their content classes. They exist as autonomous objectives within the second/foreign language curricula.

In an integrated approach, on the other hand, the language curriculum is altered so that language objectives and content objectives compatible with each other are taught concurrently. For example, the skills to describe weather may best be taught when students pursue a unit on meteorology in their science class. In this way, students learn not only appropriate language, but also how to apply this language to useful skills such as charting rainfall and temperatures in cities where the target language is spoken. A natural outcome of such activity is cultural learning as well: Students learn the geographic and climatic diversity of the places where the target language is spoken.

Ongoing evaluation of students' difficulties with the second/foreign language also provides a rich source of information for specifying content-compatible objectives. Research on the oral proficiency of immersion graduates, for example, indicates that despite achieving very high levels, these students do not approximate native-speaker norms in the productive skills of speaking and writing (see Genesee, 1987, and Swain & Lapkin, 1982, for reviews of studies). One result of such findings has been an overemphasis on incorporating traditional forms of grammar instruction into the immersion language arts curriculum. An alternative is to use analysis of students' language or communication difficulties to determine appropriate content-compatible language objectives. These objectives could then be used by teachers to provide for increased input of correct structures and for extended output through student practice.

A fifth-grade social studies lesson can be used to illustrate the role of content-compatible language. In discussing the route taken by a famous explorer, Cabrillo, for instance, the teacher can incorporate review or reinforcement of the past tense forms into the activities of the lesson. Although accurate production of the past tense is not essential for understanding the chronology of Cabrillo's travels, such a lesson presents an ideal opportunity for contextualized focus on a troublesome verb tense.

Similarly, science experiments provide a natural context for discussing cause/effect relationships. Cause and effect may be expressed simply by using *because* or more elaborately through *if-then* clauses. Either of these cause/effect language structures may be emphasized as content-compatible language objectives, depending on the proficiency level of the learners and their communicative needs.

Once persistent errors are identified, instructional activities can be designed that are either integrated into the subject-matter lesson or taught directly in the second/foreign language class. If, for example, evaluation reveals student weaknesses in the use of the conditional, teachers may design content activities requiring its use. In a fifth-grade unit on explorers of the New World, teachers may ask students to complete the sentence, "If Columbus had been from France . . ." Such an exercise not only has the advantage of providing meaningful and contextualized grammar practice, it also requires students to use critical thinking skills in applying known facts (the impact of Spanish discovery of the New World) to a hypothetical situation. On an ongoing basis, language and content teachers provide feedback to each other and to students. Thus, students' errors provide indicators of areas in which additional instruction or practice is needed.

The next section illustrates the conceptual framework just described in four different instructional settings. The first two are second language programs designed for LEP students learning English as a second language. The third and fourth settings are foreign language programs for language majority, English-speaking students. All apply the principles of the model discussed above in different ways, depending upon the instructional context and the division of instructional responsibilities.

APPLICATION OF THE CONCEPTUAL FRAMEWORK

Setting 1: The Mainstream Class

The first application is to the mainstream classroom, in which LEP students generally spend a good part of their day. Typically, this class is taught by a teacher whose primary focus is to develop students' skills in the objectives stated in the standard school curriculum.

In our conceptual framework, the mainstream teacher works closely with the ESL teacher. First, the team identifies which content areas are to be taught in the coming weeks. The content teacher identifies those language skills that will be new for all students and those that will be new only for the LEP students.

For example, in a science demonstration on the evaporation/condensation cycle, it is likely that the terms *evaporate*, *condense*, and *cycle* will be new for all students. Perhaps some students will know *moisture*; most will not. Typically, the English-speaking students will have the functional skills to ask for/give information, to describe, to generate hypotheses. More than likely, the LEP students will need assistance with some or all of these functions, particularly as they relate to this topic. Furthermore, the English-speaking students will experience few difficulties in reading the procedural discourse required to follow directions for an experiment or in writing expository prose to report the results. In contrast, the LEP students will need considerable assistance with the reading/writing tasks related to the content demands.

Working cooperatively, the mainstream teacher and language teacher thus pinpoint the linguistic needs of the learner and plan jointly to meet them. Some preparatory activities in the ESL classroom will facilitate the task of the content teacher. At the same time, the content teacher takes on the responsibility of ensuring that language skills are taught as part of the content lesson.

Planning carefully to ensure that language is acquired through experience, the mainstream teacher uses concrete materials, realia, manipulatives, and a variety of activities to provide opportunities for students to match language to its referents. Definitions, paraphrasing, and additional oral examples of the science concepts can be used to reinforce the acquisition of both the language functions and vocabulary associated with key concepts. Written materials are designed that facilitate comprehension of the content text. The mainstream teacher uses prereading strategies so that students will have the necessary background knowledge of both concepts and language with which to make sense of the text. Written assignments are structured so that not only are students' limited language skills taken into account, but language growth is planned as an outcome as well.

In this model, the content determines the language objectives. The content teacher shares in the planning in two major ways: (a) by ensuring that content is accessible to students, despite their limited language skills, through the identification of content-obligatory language objectives and (b) by planning for and implementing strategies that will address demonstrated language needs through content-compatible language study in the mainstream class.

Setting 2: The ESL Class

The second application of the conceptual framework is to the ESL pullout setting. In this type of instructional program, LEP students, usually from heterogeneous language backgrounds, are "pulled out" of mainstream classrooms for special instruction in English. An actual classroom example from Hawkins (1988) illustrates the principles of the framework. In her study, Hawkins was interested in documenting cases of "scaffolding," or assisted instruction, in which the teacher and learner engage in a series of interactions that ultimately lead to instances of actual learning. She looked at the classroom language use of fourth-grade LEP children in Rosemead, CA. What is relevant for our discussion here is the context in which these successful interactions were produced.

In this pullout program, the ESL teacher integrated language instruction with the content of the students' social studies lessons in a very interesting way. She knew that the students were just starting a unit on the California mission system but did not know the specifics of the content to be covered. Each day in the ESL class, she asked the students to tell her about what they had learned in social studies. Different students volunteered answers. At times, there was confusion about certain facts, but usually this was resolved with the teacher and students arriving at a common understanding of the facts or events.

After the question/answer session, the students practiced working with the information in different ways, such as writing short summaries or describing the chronology of events to their partners. Occasionally, however, the class could not reach an agreement about the details or events described in the social studies lesson. In these cases, the ESL class collectively developed a list of questions, wrote the questions down in their notebooks, and sought clarification of the information during the next social studies class. The following day, the ESL students used the notes they had taken in the social studies class and discussed the information in question.

This example illustrates the principles of the conceptual framework for integrating language and content instruction in a setting where language is typically taught in isolation from the subject matter of LEP students' regular classes. The content of the mission unit provided a meaningful context to practice a variety of language and academic skills. The ESL teacher reinforced certain content-obligatory language and concepts (e.g., vocabulary such as *mission, priest, to explore*, and the cause/effect concept of bringing a new way of life to the Indians).

Content-compatible language was also introduced and reinforced in a variety of ways. Students practiced asking and answering questions, taking notes, and summarizing information in written form. In addition, the students used a variety of language types, such as logical connectors of seriation, and language functions, such as agreeing and disagreeing, guessing, and arriving at a group consensus. Furthermore, the ESL teacher could diagnose both language and content deficiencies in a very direct way and incorporate this information into on-the-spot activities or reserve them for future lessons.

The ESL students were motivated to learn the material because it was important in their mainstream class. They were not talking about language per se in the ESL class but were using language to make sense of information they had learned in their social studies class. Moreover, the information gap that existed between the students and ESL teacher provided an authentic, natural context for interaction. The students became the possessors of knowledge, knowledge that the ESL teacher wanted, thereby creating a real purpose for communication.

Setting 3: The Immersion Class

Our third example comes from immersion education and considers what the proposed framework implies for the instruction of language majority children in the foreign language setting. Look at Figure 1 again. In the typical instructional setting, the language teacher and the content teacher are different people. As stated, there is rarely an existing network set up in the elementary or secondary school for these people to talk to each other. In immersion, however, there is obviously an entirely different configuration—the content teacher and the language teacher are one and the same. In this sense, immersion education is unique.

The immersion teacher simultaneously plays the roles of the content teacher teaching subject matter and the language teacher seeking out opportunities to maximize language development. Yet, probably few immersion teachers would consciously define their roles in this way. The framework therefore offers immersion teachers a method for systematic integration of language and content instruction. All planning, from curriculum development to actual delivery of instruction, must be guided by consideration of content-obligatory and content-compatible language needs. (For more detailed discussion of immersion teaching methodology, see Lorenz & Met, 1988; Snow, 1988.)

All effective immersion teachers already incorporate content-obligatory language incidentally into their content lessons; if this were not the case, immersion students could not possibly understand subject matter presented in the foreign language. However, immersion teachers often overlook the opportunity to develop content-compatible language objectives. In this model, the immersion teacher asks, What other features of language are compatible with the concept or information contained in this lesson?

So, for example, in a mathematics lesson focusing on the symbols for greater than, less than, and equals, the immersion teacher plans for language development by incorporating the language of comparison: comparing quantities, comparing attributes, stating equalities. Since the target language may be very different from English with regard to how such relationships are expressed linguistically, the mathematics lesson provides an excellent vehicle for developing content-compatible language functions and structures that might not readily transfer from the students' first language.

As diagnosticians of students' language needs, immersion teachers note aspects of language development that require clarification or extended practice. Thus, for instance, the first-grade Spanish immersion teacher notices students making frequent errors in noun-adjective agreement. In a unit on describing the colors of autumn leaves, the students practice writing sentences on the board such as *Las hojas de los robles son rojas.* Next, they work with a partner, taking turns describing the colors of different leaves. Thus, in the context of a science lesson on autumn, students have meaningful written and oral practice with a significant Spanish structure.

Similarly, in an upper grade classroom, the immersion teacher addresses, through a history lesson requiring students to develop a time line, persistent student errors in the selection of the appropriate past tense. Students have extensive opportunities to apply this grammatical structure in a meaningful activity as they discuss the events in the time line. Teachers can contrast the continuous past and the discrete past through the visual representations on the time line, highlighting for the students the contrast in meaning between the two past tenses.

In sum, this model requires the immersion teacher to take on a dual role. In the immersion class, language skills and structures can be taught and reinforced in natural contexts both within subject-matter lessons and within the language arts period, thereby providing greater opportunities to integrate the teaching of language and content. Moreover, the approach ensures that the language arts curriculum will be relevant to the immersion students' academic and communicative needs.

Setting 4: The FLES Class

The FLES classroom provides the setting for the fourth example to be discussed. In most FLES classes, the "traveling" foreign language teacher sees students for up to 40 minutes three to five times per week. Traditionally, these classes have operated independently from classes in the other curricular areas. In this conceptual framework, foreign language objectives derive from the content-compatible language of the standard school curriculum. The FLES teacher lays the language curriculum alongside the mainstream curriculum, looking for points of coincidence.

Perhaps the most fertile ground for integrating foreign language (and culture) with the elementary school curriculum is social studies. Numerous social studies objectives are compatible with foreign language objectives. Students in the early elementary grades study their own community and communities around the world.

In the FLES class, students can be taught the vocabulary related to places in the community (e.g., the bank, the post office, the names of different types of stores, etc.). They may be asked to distinguish aspects of their community that are not found in other communities (e.g., rural versus urban versus suburban); they can contrast their community with one in a country where the target language is spoken; they can categorize places in the community by whether they provide goods or services; they can make maps of their community; they can make dioramas or other visual representations of their community and those of the target culture; they can contrast goods and services available in their community with those of the target culture. In sum, many of the activities appropriate to the social studies curriculum may be conducted entirely in the foreign language in the FLES class.

Foreign language objectives for weather are compatible with a science unit on meteorology; objectives for colors and shapes are similarly consistent with the kindergarten/first-grade mathematics curriculum. Clearly, these types of activities go well beyond simply labeling. They challenge students in the foreign language class to use their language skills as a vehicle for acquiring concepts and information, as a tool for thinking. Furthermore, the FLES teacher does not have to search for material because the foreign language objectives derive naturally from the content curriculum.

These four examples are intended to illustrate practical applications of our conceptual framework. We believe that the model is equally applicable to other instructional settings where second/foreign language learning is one of the goals of instruction. The common ground of the four instructional situations described is reconceptualizing the role of teachers—both language teachers and content teachers—to recognize the value of integrating language and content. Such an integration will assist language minority students in mastering English and achieving in school and will help language majority students to develop higher levels of proficiency in the foreign language.

IMPLICATIONS OF AN INTEGRATED APPROACH

Clearly, the integration of language and content teaching carries with it a number of broad implications, the first of which is that ESL/foreign language teachers and content teachers must collaborate. Such collaboration requires a reciprocal relationship between instructors. Thus, the language instructor may consult with the classroom teacher about what is being taught, with particular attention given to content that has specific or special language requirements. The language instructor is then able to incorporate into language instruction meaningful and important content that has evident language-related value in the rest of the curriculum.

Likewise, the classroom teacher can consult with the language teacher regarding what can be done in the content areas to promote the learning of language skills requisite to particular content areas. Since content teachers may be ill-prepared to "teach" language or even to recognize students' language-learning needs because of lack of training in language-teaching pedagogy, language teachers become pedagogical resources for mainstream teachers who are willing to assume some responsibility for treating students' language needs.

The artificial and rigid distinctions between the roles of the language teacher and the content teacher are broken down in this model. For sheltered English and immersion teachers, these roles are fused, requiring them to plan consciously for language growth as an integral part of content instruction.

A corollary implication of this perspective concerns the formal integration and coordination of the language arts and academic curricula. Accordingly, the content areas of the school program are cross-referenced with language-learning objectives, and the second/foreign language curriculum is cross-referenced with subject areas that provide particularly suitable vehicles for teaching language objectives. This language-across-the-curriculum perspective has been advocated for some time for native speakers of English (see Anderson, Eisenberg, Holland, Weiner, & Rivera-Kron, 1983; Department of Education and Science, 1975). Such an integrated approach ensures that language skills learned in the second/foreign language class will be useful and usable in content classes, since it effectively obviates the need for transfer. This is particularly important for students in bilingual programs or for LEP students who are pulled out for ESL instruction.

Full integration of language and content instruction also implies integration of instruction across grade levels so as to achieve a coherent developmental program. There is some evidence from evaluations of immersion programs that language development may reach a plateau in the middle or late elementary grades (Genesee, 1987). It appears that students are able to make do with a relatively limited set of language skills beyond the primary grades, despite the fact that the content itself is more demanding. In immersion, it is assumed that students' language develops as a function of unsystematic and unknown changes in the communicative requirements of academic instruction. If the curriculum is not developmental from a language-learning point of view and/or if language use by the teacher for academic instruction is not developmental in that it does not make increasingly greater demands on the students, then students' language skills will not continue to develop.

Concerted measures are called for in this model in order to promote continuous language growth across grade levels. This may be achieved by consciously and systematically incorporating increasingly advanced levels of language into the content areas at successively higher grades. Similarly, integrated foreign language classes (e.g., FLES) that are tied to content need to take into account the developmental aspects of language learning when selecting content for language instruction. Otherwise, there is the risk of repetition and redundancy in instruction and of stagnation in learning across grades.

It follows that the integration of content and language instruction may also entail integration of differentially difficult language structures, skills, or functions that are required for effective communication about the content in question. For example, students may need to learn conditionals as well as present tense verb forms early on in order to comprehend or participate in discussions about science or history. Or written language may need to be taught along with spoken language. Whereas the second/foreign language curriculum has traditionally been organized around a hierarchy of syntactic structures from the simple to the complex, an integrated approach eschews distinctions that are artificial from a communication point of view. The communicative needs of the learner and/or the communicative requirements of particular content inform the teachers as to what and when particular language elements are to be taught.

Furthermore, the integration of content and language instruction implies the integration of higher order thinking skills into the language classroom. As discussed in the preceding point, this is particularly likely in cases in which the content is based on the academic curriculum. Use of higher order thinking is desirable because it can stimulate learners' interest in the content and therefore in language, precisely because it is somewhat beyond their level of competence. In contrast, nonintegrated language instruction may be of little interest to learners, since the limited concepts and content embodied in such instruction may be simplified to match the more limited language objectives of these approaches. Use of higher order thinking skills is also desirable as a means of promoting higher order language skills or, as discussed above, as a means of promoting advanced levels of language proficiency. This will obtain to the extent that higher order thinking skills require more complex or elaborate language skills in more cognitively demanding tasks.

A final implication of the integration of content and language instruction concerns the relationship between learning and teaching. Ellis (1984) has argued that language use, or "doing discourse," and language learning are the same thing. That is to say, "the procedures that the learner employs in using L2 knowledge are also the means by which new L2 knowledge is internalised" (p. 52). Few researchers or educators would disagree that frequent opportunities to use language can facilitate language learning. Thus, an integrated approach to content and language instruction aims to engage students fully with teaching activities and pedagogical materials. Teaching serves to provide opportunities for students to engage themselves in learning about content through language.

CONCLUSION

In sum, the conceptual framework proposed here offers language and content teachers a systematic approach to the identification and instruction of language aims within content teaching. Although four settings were selected to illustrate the practical application of the framework, we believe the framework also applies to other types of second and foreign language teaching settings. Finally, we believe that the implications of integrating language and content teaching must be considered seriously if content-based instruction is to be implemented effectively.

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The Cognitive Academic Language Learning Approach: A Bridge to the Mainstream

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The Cognitive Academic Language Learning Approach (CALLA) is designed for limited English proficient students who are being prepared to participate in mainstream content-area instruction. CALLA provides transitional instruction for upper elementary and secondary students at intermediate and advanced ESL levels. This approach furthers academic language development in English through content-area instruction in science, mathematics, and social studies. In CALLA, students are taught to use learning strategies derived from a cognitive model of learning to assist their comprehension and retention of both language skills and concepts in the content areas. This article first discusses the rationale for CALLA and the theoretical background on which the approach is based. This is followed by a description of the three components of CALLA: a curriculum correlated with mainstream content subjects, academic language development activities, and learning strategy instruction. Finally, a lesson plan model integrating these three components is briefly described.

The major objective of ESL programs at the elementary and secondary levels in the United States is to prepare students to function successfully in classrooms where English is the medium of instruction for all subject areas. The approaches used to achieve this objective vary considerably, despite their common intent. A recent national survey (Chamot & Stewner-Manzanares, 1985) of the state of the art in ESL in public schools, for example, found that of 13 different instructional approaches currently in use, the most widely cited by a sample of school districts, Bilingual Education Multifunctional Support Centers, and teacher trainers in representative universities were the audiolingual method, the Natural Approach; Total Physical Response, communicative approaches, and eclectic or combination approaches. None of these approaches, whatever their other merits or deficiencies, focuses specifically on developing the English language skills used in content-area subjects, such as science, mathematics, and social studies.

Students in ESL programs develop many important skills in English and may become quite proficient in day-to-day survival in English. At the conclusion of 1 or more years of ESL instruction, minority-language students may perform satisfactorily on language proficiency assessment measures and be judged by their teachers as proficient in English communicative skills. They are then mainstreamed into the all-English curriculum, where typically they encounter severe difficulties with the academic program. This problem has been attributed to the increased language demands made by the academic curriculum, particularly as students move beyond the primary grade level. Various researchers have found that the development of these academic language skills lags behind the development of social communicative language skills, often by as much as 5 to 7 years (Cummins, 1983, 1984; Saville-Troike, 1984).

Before entering the mainstream curriculum, minority-language students should be able to use English as a tool for learning subject matter. This ability becomes particularly acute from the middle elementary grades onward because in these upper grades the language of subjects such as social studies, science, and mathematics becomes more academic and less closely related to the language of everyday communication than is the case at the primary grade level. By the middle elementary grades, students are expected to have mastered basic skills in reading, writing, and computation and to understand and use increasingly abstract language. At this level, and increasingly at higher grade levels, the curriculum requires that students listen and read to acquire new information, speak and write to express their understanding of new concepts, use mathematics skills to solve problems, and apply effective strategies for learning to all areas of the curriculum. For the minority-language student, these requirements of the upper elementary and secondary school entail additional language demands. Language proficiency, which may have previously focused on communicative competence, must now focus on academic competence.

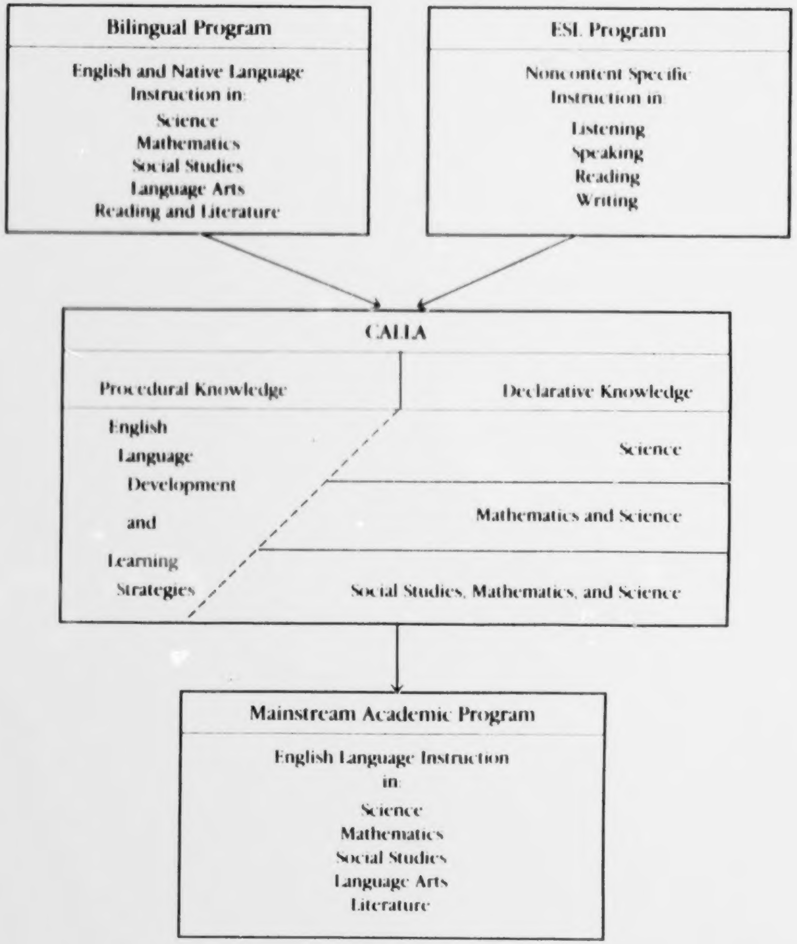
A DESCRIPTION OF THE COGNITIVE ACADEMIC LANGUAGE LEARNING APPROACH

This article describes the Cognitive Academic Language Learning Approach (CALLA), an instructional method for limited English proficient (LEP) students who are being prepared to participate in mainstream content instruction. CALLA (pronounced /kalá/) combines English language development with content-based ESL and with instruction in special learner strategies that will help students understand and remember important concepts. Richards (1984) has pointed out that second language methods can be based on a syllabus (or curriculum) or on a theory of learning processes and instructional procedures and that many current methodological approaches reflect one assumption but not the other. CALLA makes these two approaches to language teaching methods interdependent by integrating language learning and teaching theory and the specification of content to be taught.

Richards (1984) has also indicated the importance of addressing the needs of second language learners in program planning. CALLA is designed to meet the educational needs of three types of LEP students: (a) students who have developed social communicative skills through ESL or exposure to an English-speaking environment but who have not developed academic language skills appropriate to their grade level; (b) students exiting from bilingual programs who need assistance in transferring concepts and skills learned in their native language to English; and (c) bilingual, English-dominant students who are even less academically proficient in their native language than in English and need to develop academic English language skills.

The bridge that CALLA provides between special language programs and mainstream education is illustrated in Figure 1. LEP students in ESL and bilingual programs develop initial skills in understanding, speaking, reading, and writing in English, and they practice the essentials of communication for mainly social purposes. CALLA is intended for students at the intermediate and advanced levels of English proficiency who need additional experiences in English language development specifically related to three academic areas: science, mathematics, and social studies. The intent is to introduce vocabulary, structures, and functions in English by using concepts drawn from content areas. CALLA is not intended to substitute for mainstream content-area instruction or to teach the basic content expertise required in school district curricula, as is the intention of immersion and "sheltered English" programs.

FIGURE 1
The CALLA Model
A Bridge to the Mainstream


Bilingual Program
English and Native Language
Instruction in:
Science
Mathematics
Social Studies
Language Arts
Reading and Literature
ESL Program
Noncontent Specific
Instruction in:
Listening
Speaking
Reading
Writing
CALLA
Procedural Knowledge
Declarative Knowledge
English
Language
Development
and
Learning
Strategies
Science
Mathematics and Science
Social Studies, Mathematics, and Science
Mainstream Academic Program
English Language Instruction
in:
Science
Mathematics
Social Studies
Language Arts
Literature

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The three content areas addressed by CALLA can be phased into the intermediate-level ESL class one at a time. We recommend beginning with science, since by using a discovery approach to science, teachers can capitalize on experiential learning opportunities which provide both contextual support and language development. The next subject to be introduced is mathematics, which has less contextual support and a more restricted language register than science. Social studies is the third subject introduced in the CALLA model, since of the three, it is the most language- and culture-dependent; in addition, it includes many topics which are not easily amenable to experiential learning activities. A fourth subject area, English language arts, is a planned addition to the model. Because language is the focus of study as well as the medium through which lessons in literature and composition are taught, this subject is the most language-dependent of all, and it is also probably at least as culture-dependent as social studies.

The CALLA model has three components: (a) a curriculum correlated with mainstream content areas, (b) English language development integrated with content subjects, and (c) instruction in the use of learning strategies. Each of these components is examined separately, following a discussion of the theoretical framework underlying CALLA. The final section of this article provides guidelines for integrating these components into a single instructional approach.

THEORETICAL BACKGROUND

A brief examination of the theoretical base for CALLA illustrates the relationship between this instructional approach and current developments in cognitive psychology. Recent efforts to describe both second language acquisition and learning strategies within the cognitive theory proposed by Anderson (1981, 1983, 1985) provide the necessary theoretical foundation (O'Malley, Chamot, & Walker, in press).

In Anderson's view, information is stored in memory in two forms: *declarative knowledge*, or what we know about a given topic, and *procedural knowledge*, or what we know how to do. Examples of declarative knowledge include word definitions, facts, and rules, including our memory for images and sequences of events. This type of knowledge is represented in long-term memory in terms of meaning-based concepts rather than precisely replicated events or specific language. The concepts on which meaning is based are represented in memory as nodes that are associated with other nodes through connecting associations or links. These interconnected nodes may be organized into propositions, which show the relationships of arguments in sentences; into hierarchies, which show classification relationships with similar concepts in memory; or into larger units of memory called schemata, which reveal a configuration of interrelated features that define a concept. In any of these representations, the strength of associations in the link between nodes is largely due to prior learning experiences.

Procedural knowledge underlies our ability to understand and generate language. According to Anderson's theory, procedural knowledge is represented in memory by production systems, which are the basis for explaining how complex cognitive skills such as language are learned and used. Production systems are rule-based conditional actions (*if-then* relationships) which are initially represented like declarative knowledge but which may become automatic through repeated practice. Production systems have been used to describe procedural knowledge in reading, mathematical problem solving, and chess, as well as language comprehension and production. Production systems have been used by Anderson (1983) to represent linguistic rules and by O'Malley, Chamot, and Walker (in press) to represent sociolinguistic, discourse, and strategic competence.

Whereas declarative knowledge of factual information may be acquired quickly, procedural knowledge such as language skill is acquired gradually and only with extensive opportunities for practice. Anderson indicates that language is a complex cognitive process which requires explicit or implicit knowledge about language as a system and extensive practice in order to reach an autonomous stage. This theoretical distinction is a familiar one to second language teachers, who tend to alternate between teaching language as declarative knowledge (grammar, rules, pronunciation, vocabulary) and language as procedural knowledge (communicative competence, functional proficiency, fluency).

What is most important about Anderson's theory is that an interplay between declarative and procedural knowledge leads to the refinement of language ability. Anderson discusses ways in which new information is processed in working memory and accessed to long-term memory, from which it can be retrieved at a later date. He identifies three empirically derived stages that describe the process by which a complex cognitive skill such as language is acquired: (a) a cognitive stage, in which learning is deliberate, rule based, and often error laden; (b) an associative stage, in which actions are executed more rapidly and errors begin to diminish; and (c) an autonomous stage, in which actions are performed more fluently and the original rule governing the performance may no longer be retained. Thus, as the same procedure is used repeatedly, access to the rules that originally produced the procedure may be lost.

Although he does not mention learning strategies, Anderson's description of these cognitive processes is congruent with the types of learning strategies which have been identified in research with LEP students (Cohen & Aphek, 1981; Naiman, Fröhlich, Stern, & Todesco, 1978; O'Malley, Chamot, Stewner-Manzanares, Küpper, & Russo, 1985; O'Malley, Chamot, Stewner-Manzanares, Russo, & Küpper, 1985). A number of the mental processes Anderson discusses serve to explain how strategies are represented, how they are learned, and how they influence second language acquisition. O'Malley, Chamot, and Walker (in press) have suggested that learning strategies are declarative knowledge which may become procedural knowledge through practice. Learning strategies are conscious and deliberate when they are in the cognitive and associative stages of learning but may no longer be considered strategic in the autonomous stage, since the strategies are applied automatically and often without awareness (Rabinowitz & Chi, 1987). As with other complex cognitive skills, the strategies are acquired only with extensive opportunities for application.

Viewing second or foreign language acquisition as a cognitive skill offers several advantages for research on language learning strategies. Anderson's model provides a comprehensive and well-specified theoretical framework for second language learning and can be adapted to provide a detailed process view of how students acquire and retain a new language. This model can also help to identify and describe the existence and use of specific learning strategies for different types of learners at various stages in second language development. Finally, a cognitive-skill model of second language acquisition can provide guidance in the selection and application of learning strategies in the instruction of second and foreign language students.

We have applied Anderson's theoretical principles to the CALLA model in the following preliminary way:

1. The content component of the CALLA model represents declarative knowledge. This includes the concepts, facts, and skills underlying science, mathematics, and social studies at the student's grade level. An extension of these content areas to include English language arts would add grammatical knowledge, rhetorical knowledge, and knowledge about literary themes, plots, and story grammars to this store of declarative knowledge.
2. The language development component of CALLA aims to teach the procedural knowledge that students need to use language as a tool for learning. In this component, students are given sufficient practice in using language in academic contexts so that language comprehension and production become automatic and students develop the ability to communicate about academic subjects.
3. The learning strategies instruction component of the CALLA model builds on Anderson's theory and suggests ways in which teachers can foster autonomy in their students. Many of the learning strategies identified in previous research (O'Malley, Chamot, & Küpper, 1986; O'Malley, Chamot, Stewner-Manzanares, Küpper, & Russo, 1985; O'Malley, Chamot, Stewner-Manzanares, Russo, & Küpper, 1985; Rubin, 1981; Wenden, 1985) can be used as powerful learning tools.

COMPONENTS OF THE MODEL

The Content-Based Curriculum

The importance of integrating language learning with content learning has been stated by Mohan (1986):

> Regarding language as a medium of learning naturally leads to a cross-curriculum perspective. We have seen that reading specialists contrast learning to read with reading to learn. Writing specialists contrast learning to write with writing to learn. Similarly, language education specialists should distinguish between language learning and using language to learn. Helping students use language to learn requires us to look beyond the language domain to all subject areas and to look beyond language learning to education in general. Outside the isolated language classroom students learn language and content at the same time. Therefore we need a broad perspective which integrates language and content learning. (p. 18)

The purpose of CALLA is to provide a broad framework for using language to learn through the integration of language and content.

Content-based English language development is not only important for developing academic language skills, but it is also inherently more interesting to many students than ESL classes which focus on language only. Content areas such as science, mathematics, and social studies present numerous topics related to a variety of personal interests. LEP students can be motivated not only by the topics presented but also by knowing that they are developing the concepts and skills associated with these subjects—in other words, that they are actually doing "real" school work instead of merely learning a second language for applications that have yet to be revealed.

LEP students making the transition from a special language program such as bilingual education or ESL need systematic and extensive instruction and practice in the types of activities they will encounter in the mainstream class. An occasional, randomly selected ESL lesson on a topic in social studies or science will not adequately prepare students. This is especially true in the middle and upper grade levels, where the curriculum in the content areas becomes progressively more demanding, both in terms of information load and language demands. To be most effective, a content-based ESL curriculum should encompass the sequence and major-scope areas of the mainstream curriculum. The topics incorporated should be authentic and important topics for the grade level of the student.

In a beginning-level ESL class, for example, middle and upper grade (as well as primary grade) students learn to count and do simple arithmetic computation in English. But this is not an appropriate content-based, English language development curriculum for older students because it is not sufficiently challenging. A curriculum that merely reviews concepts and skills already developed in the first language can rapidly become a series of exercises in translation of vocabulary and skills from L1 to L2 and may not stimulate students to begin to use the second language as a tool for learning. Instead, students who already have a background in a content area and who have already developed English proficiency through ESL instruction need a content-based curriculum in which they use English to solve problems and develop additional concepts that are appropriate for their grade and achievement level.

For these reasons, it is important that the content component be based on the mainstream curriculum for the grade level of the students who will participate in the program. This does not mean that it should be identical to the mainstream program (which would make it a submersion model) or that it should replace the mainstream program (as in immersion and "sheltered English" programs). Rather, a CALLA curriculum includes a sample of high-priority content topics that develop academic language skills appropriate to the subject area at the student's grade level. Of course, adjustments will need to be made in the case of students whose previous schooling has been interrupted and who are therefore not at grade level in their native language. As with any instructional program, teachers should discover what students already know about a subject and then build on this previous knowledge by providing them with experiences that develop new concepts and expand previous ones.

To select content topics for CALLA lessons, ESL teachers can coordinate with classroom teachers and consult subject-area textbooks for the grade level concerned. Classroom teachers can identify the most important concepts and skills taught in the content areas they teach. Science, mathematics, and social studies textbooks can be used as a source of specific information to be presented. Having used these resources to identify lesson topics, the ESL teacher can build language development activities onto the content information selected.

To sum up, the CALLA content-based curriculum is based on authentic subject matter from the mainstream curriculum which has been selected as central to the concepts and skills that are developed at particular grade levels.

English Language Development

The purpose of English language development, the second component of the CALLA model, is to provide students with practice in using English as a tool for learning academic subject matter. Reading and language arts can be taught as part of content-area subjects such as social studies, mathematics, and science. The language demands of the different content subjects, which include the language of curriculum materials and of classroom participation, need to be analyzed so that students can be taught the actual language functions, structures, and subject-specific vocabulary that they will need when they enter the mainstream content class. These language demands, which are different from those of the beginning-level ESL class or the type of language used for social interaction, need to be specifically taught and practiced in the context of actual subject-matter learning.

Cummins (1982, 1983) indicates that two dimensions can be used to describe the language demands encountered by LEP students. The first dimension concerns contextual cues that assist comprehension, and the second concerns the complexity of the task. Language that is most comprehensible is contextualized and rich in nonverbal cues such as concrete objects, gestures, facial expressions, and visual aids. Language that is least comprehensible is language in which context cues have been reduced to such a degree that comprehension depends entirely on the listener's or reader's ability to extract meaning from text without assistance from a nonverbal context

The second dimension, task complexity, suggests that comprehension is affected by the cognitive demands of the task. Examples of less demanding language tasks are vocabulary, grammar drills, and following directions. More cognitively demanding tasks call on the use of language for higher level reasoning and for integrative language skills (e.g., reading and listening comprehension, speaking or writing about academic topics). By combining these two dimensions, tasks involving language use can be classified into one of four categories: easy and contextualized, difficult but contextualized, context reduced but easy, and context reduced and difficult.

Although context-reduced language is commonly associated with written language, oral language can also vary along the context-embedded to context-reduced continuum. Davidson, Kline, and Snow (1986) define contextualized oral language as conversational, interactive, and supported by shared knowledge and experiences. Decontextualized oral language, on the other hand, is characterized as language that is not interactive and concerns a topic on which no shared knowledge exists. This seems a fair description of much of the content and presentation style in typical subject-area instruction.

Figure 2 is based on Cummins's (1982) model of two intersecting continua for second language tasks. Allen (1985) has pointed out that ESL classes generally stress activities in Quadrant I and that students are then mainstreamed directly into Quadrant IV activities. The sample activities listed in each quadrant can provide the teacher with information about activities appropriate to the English proficiency level and age or grade placement of LEP students. The activities listed in Quadrant I might be used in beginning-level ESL classes. LEP students' first experiences with decontextualized language could be planned around the activities listed in Quadrant II. Some of these activities relate to personal or social communication, and others relate to school activities involving mainly rote learning. Academic content is included in the activities listed in Quadrant III, but context needs to be built into the activities to assist comprehension. Activities in this quadrant require hands-on experiences and concrete referents. Finally, the activities listed in Quadrant IV represent those of the mainstream classroom at the upper elementary and secondary levels. These are the kinds of activities that LEP students have most difficulty with because they are cognitively demanding and because the language associated with them is reduced in context. Although ESL students probably need to begin with Quadrant I activities and must eventually be able to perform Quadrant IV activities, some teachers may prefer

FIGURE 2

Classification of Language and Content Activities
Within Cummins's (1982) Framework

	← Nonacademic or cognitively undemanding activities	Academic and cognitively demanding activities →
↑ Context-embedded	I Developing survival vocabulary Following demonstrated directions Playing simple games Participating in art, music, physical education, and some vocational education classes Engaging in face-to-face interactions Practicing oral language exercises and communicative language functions Answering lower level questions	III Developing academic vocabulary Understanding academic presentations accompanied by visuals, demonstrations of a process, etc Participating in hands-on science activities Making models, maps, charts, and graphs in social studies Solving math computation problems Solving math word problems assisted by manipulatives and/or illustrations Participating in academic discussions Making brief oral presentations Using higher level comprehension skills in listening to oral texts Understanding written texts through discussion, illustrations, and visuals Writing simple science and social studies reports with format provided Answering higher level questions
Context-reduced ↓	II Engaging in predictable telephone conversations Developing initial reading skills: decoding and literal comprehension Reading and writing for personal purposes: notes, lists, recipes, etc Reading and writing for operational purposes: directions, forms, licenses, etc Writing answers to lower level questions	IV Understanding academic presentations without visuals or demonstrations Making formal oral presentations Using higher level reading comprehension skills: inferential and critical reading Reading for information in content subjects Writing compositions, essays, and research reports in content subjects Solving math word problems without illustrations Writing answers to higher level question Taking standardized achievement tests

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that activities in Quadrants II and III take place concurrently rather than sequentially.

An important objective of the English language development component of the CALLA model is to provide students with extensive transitional language activities in Quadrant III and gradually initiate some practice with the context-reduced and cognitively demanding activities of Quadrant IV. Although some language activities may be integrated with mainstream content-area instruction in the typical school curriculum, these may consist primarily of reading for information. LEP students need to develop not only content-area reading skills, but also the listening, speaking, and writing skills associated with each subject. The number and variety of language activities in a content-based curriculum for LEP students should provide many opportunities for the development of academic language proficiency.

The following aspects of language should be included in the language development component of the CALLA model (Chamot, 1985): development of the specialized vocabulary and technical terms of each content area; practice with the language functions used in academic communication, such as explaining, informing, describing, classifying, and evaluating; development of the ability to comprehend and use the language structures and discourse features found in different subject areas; and practice in using the language skills needed in the content classroom, such as listening to explanations, reading for information, participating in academic discussions, and writing reports. By integrating these types of language activities with grade-appropriate content, a curriculum based on the CALLA model can provide LEP students with the conceptual knowledge and language skills they will need to participate successfully in the mainstream classroom.

Learning Strategy Instruction

The CALLA model uses learning strategy instruction as an approach to teaching the content-based language development curriculum described in the preceding sections. Learning strategy instruction is a cognitive approach to teaching that helps students learn conscious processes and techniques that facilitate the comprehension, acquisition, and retention of new skills and concepts. The use of learning strategy instruction in second language learning is based on four main propositions (see Chipman, Sigel, & Glaser, 1985; Derry & Murphy, 1986; Weinstein & Mayer, 1986):

1. Mentally active learners are better learners. Students who organize new information and consciously relate it to existing knowledge should have more cognitive linkages to assist comprehension and recall than do students who approach each new task as something to be memorized by rote learning.
2. Strategies can be taught. Students who are taught to use strategies and provided with sufficient practice in using them will learn more effectively than students who have had no experience with learning strategies.
3. Learning strategies transfer to new tasks. Once students have become accustomed to using learning strategies, they will use them on new tasks that are similar to the learning activities on which they were initially trained.
4. Academic language learning is more effective with learning strategies. Academic language learning among students of English as a second language is governed by some of the same principles that govern reading and problem solving among native English speakers.

While research evidence supports the first two propositions, the transfer of strategies to new learning requires extensive instructional support. We have attempted to make learning strategy instruction a pervasive part of the CALLA program in response to this need, not only to encourage use of strategies while the students are in CALLA, but also to encourage strategy use when the students exit to the mainstream curriculum.

The fourth proposition is based in part on our own observation that strategies for language learning are similar to strategies for learning content (O'Malley, Chamot, Stewner-Manzanares, Küpper, & Russo, 1985) and in part on our positive experiences with the effects of learning strategy instruction on integrative language tasks among ESL students (O'Malley, Chamot, Stewner-Manzanares, Russo, & Küpper, 1985). While strategies for learning language and content are very similar, LEP students may have difficulty in discovering the application of strategies to content because their attention is focused on figuring out and comprehending the English language. In CALLA, the blending of language and content results in unified learning tasks to which students can apply learning strategies that facilitate the comprehension and retention of both declarative and procedural knowledge.

Strategy instruction, we believe, is necessary to provide LEP students with extra support in learning language and content, especially when they are in the process of making the transition from the simplified language of the beginning-level ESL class to the more authentic language of the intermediate and advanced level. This is not a new notion. Honeyfield (1977), in arguing against simplification of text after the beginning ESL level, suggests an alternative approach in which we would help intermediate and advanced students to "cope earlier with unsimplified materials by giving training in such skills as *inferring unknown meanings from context, giving selective attention to material in accordance with realistic reading purposes, recognizing communicative structure* [italics added], and others" (p. 440). The italicized skill descriptions are precisely what we understand as conscious learning strategies, as defined in the cognitive psychology literature.

Studies in learning strategy applications indicate that students taught to use new strategies can become more effective learners (O'Malley, 1985). In a recent experimental study, second language learners were taught to use learning strategies for vocabulary, listening comprehension, and formal speaking tasks using academic content (O'Malley, Chamot, Stewner-Manzanares, Russo, & Küpper, 1985). The results showed that learning strategy instruction was most effective for the more integrative language tasks which involved the use of academic language skills to understand or produce extended text.

Our original list of learning strategies (see O'Malley, Chamot, Stewner-Manzanares, Russo, & Küpper, 1985) was derived from research on learning strategies in first language reading and problem solving, research in second language learning, and our own initial research. This initial learning strategies list has undergone adaptations based on later research (O'Malley, Chamot, & Küpper, 1986) and on our experiences in training teachers on the CALLA model. The three major categories of learning strategies, however, have continued to be useful in differentiating groups of strategies and in showing teachers how to integrate strategy instruction into their daily lessons. These major categories are as follows:

1. Metacognitive strategies: These involve executive processes in planning for learning, monitoring one's comprehension and production, and evaluating how well one has achieved a learning objective.
2. Cognitive strategies: The learner interacts with the material to be learned by manipulating it mentally (as in making mental images or relating new information to previously acquired concepts or skills) or physically (as in grouping items to be learned in meaningful categories or taking notes on or making summaries of important information to be remembered).
3. Social-affective strategies: The learner either interacts with another person in order to assist learning, as in cooperation or asking questions for clarification, or uses some kind of affective control to assist learning.

We have selected a smaller number of strategies from the original list of those reported by ESL students (see O'Malley, Chamot, Stewner-Manzanares, Russo, & Küpper, 1985) for teachers to use as the principal instructional approach for CALLA. These, we believe, are strategies which are easy to teach, useful for both discrete and integrative language tasks, and applicable to both content and language learning.

Learning strategies for CALLA are listed and defined in the Appendix. Some of these strategies may be known to teachers by the term of ***study skills***. Study skills describe overt behavior, such as taking notes, writing summaries, or using reference materials. Learning strategies, on the other hand, generally refer to mental processes which are not observable. Although this distinction between learning strategies and study skills is important theoretically, we do not believe that it is always necessary to differentiate them in practice.

Some learning strategies are particularly powerful because they can be used for many different types of learning activities. For example, metacognitive strategies which can be applied to any type of learning are selective attention, self-monitoring, and self-evaluation. Students can use selective attention to assist comprehension by attending to the linguistic markers that signal the type of information that will follow. Some examples of phrases which serve as linguistic markers are discussed in Chamot and O'Malley (1986b):

> "Today we're going to talk about . . ." indicates the main topic of the presentation. Markers such as "The most important thing to remember about . . ." indicate that a main idea is about to be presented. When students hear markers such as "For instance . . ." or "An example of . . .", they know that they can expect an example or a detail. And when students hear a marker such as "Finally, . . ." or "In conclusion, . . .", they can expect a concluding summary of the main points. (p. 11)

Self-monitoring is a metacognitive strategy which has been linked to productive language, in which students correct themselves during speaking or writing. We have discovered that effective ESL listeners also use self-monitoring to check on how well they are comprehending an oral text (O'Malley, Chamot, & Küpper, 1986). The consequence of self-monitoring is that students spend more time being actively involved in the comprehension and learning task. Self-evaluation assists learning by helping students decide how well they have accomplished a learning task and whether they need to relearn or review any aspects of it.

A number of cognitive learning strategies can be used by ESL students to assist learning. Elaboration is one of the most powerful strategies and can be applied to all four language skills and to all types of content. When students elaborate, they recall prior knowledge, consciously interrelate parts of what they are learning, and integrate new information to their existing knowledge structure, or schemata. The following example (Chamot & O'Malley, 1986a) illustrates elaboration:

> The learner thinks, "Let's see. I have to read some information about the early history of California. What do I already know about California history? Well, the Spanish were there first, and then it belonged to Mexico, then there was a war between Mexico and the U.S., and now it's an important state . . ." The student goes on to read the assigned text, confirms previous knowledge, and also learns some new facts. During or after reading, the student may think, "Well, I didn't know that there were Russians in California too. Let's see, how does this fit in with what I already know about the Spanish in California?" The student uses elaboration in relating new information to previous knowledge and by incorporating it into an existing conceptual framework. (p. 18)

School tasks often require students to learn new information on topics on which they do not possess existing knowledge, so that elaboration may not be possible. It is important for students in this case to organize the new information effectively so that the information can be retrieved and future efforts to use elaboration will be fruitful. Grouping is a strategy which students without prior knowledge on a topic can use to organize or classify new information. In this way, a network, or schema, is established that will make the new knowledge accessible in the future. Grouping is particularly important in science and social studies content areas, where students need to understand classification systems and cause-and-effect relationships. To facilitate comprehension of groups or sets, students may use the strategy of imagery as a way of making mental or actual diagrams of the structure of new information. Grouping and imagery may be particularly effective in conveying knowledge structures to students whose prior education has been interrupted.

The social-affective learning strategies listed in the Appendix can be helpful for many types of learning activities. Cooperation is a strategy which has been shown to have positive effects on both attitude and learning. It is particularly useful for LEP students because by working cooperatively on a task, they practice using language skills directly related to an academic task. Questioning for clarification is also important because students need to learn how to ask questions when they do not understand. Some LEP students may not know how or when to ask appropriate questions, or even that U.S. teachers expect students to ask questions. Self-talk is an affective strategy in which students allay their anxiety by reassuring themselves about their own abilities. It has been used as a way of helping students overcome test anxiety and could be used in any situation in which students feel anxious about a learning task.

We believe that teachers can help their LEP students become more effective learners in general by showing them how to apply a variety of learning strategies to different activities that they may encounter in learning English as well as other subjects in the curriculum. Suggestions for learning strategy instruction include showing students how to apply the strategies, suggesting a variety of different strategies for the language and content tasks of the curriculum, and providing many examples of learning strategies throughout the curriculum so that students will be able to generalize them to new learning activities in other classes and even outside the classroom (Chamot & O'Malley, 1986a). Effective transfer of strategies to other classes also requires that students be made aware of the strategies they are using and be able to verbalize the conditions under which strategies can be used.

A DESCRIPTION OF A CALLA LESSON PLAN MODEL

To integrate the three components of CALLA, we have developed a lesson plan model that incorporates content-area topics, language development activities, and learning strategy instruction. In this plan, learning strategy instruction is embedded into daily lessons so that it becomes an integral part of the regular class routine, rather than a supplementary activity. In this way, students have opportunities to practice the strategies on actual lessons, and use of the strategies becomes part of the class requirements. At first, the teacher shows the students how to use the strategies and provides reminders and cues so that they will be used.

Later, teachers should diminish the reminders to allow students to use strategies independently.

CALLA lessons identify both language and content objectives, so that teachers can specify both procedural and declarative tasks for their ESL students. The lessons are divided into five phases: Preparation, Presentation, Practice, Evaluation, and Follow-Up Expansion. In the Preparation phase, teachers provide advance organizers about the lesson, and students identify what they already know about a topic, using elaboration as a strategy. In the Presentation phase, teachers provide new information to students, using techniques which make their input comprehensible. Teachers can use advance organizers and encourage the use of selective attention, self-monitoring, inferencing, summarizing, and transfer. In the Practice phase, students engage in activities in which they apply learning strategies, often in cooperative small-group sessions. During this phase, the teacher should encourage the use of strategies such as grouping, imagery, organizational planning, deduction, inferencing, and questioning for clarification. In the Evaluation phase, students reflect on their individual learning and plan to remedy any deficiencies they may have identified. Finally, in the Follow-Up Expansion phase, students are provided with opportunities to relate and apply the new information to their own lives, call on the expertise of their parents and other family members, and compare what they have learned in school with their own cultural experiences.

CONCLUSION

The Cognitive Academic Language Learning Approach, an instructional method for limited English proficient students at the intermediate and advanced levels of English proficiency, is intended to be a bridge between bilingual or ESL instruction and academic mainstream classes. It focuses on English language development through cognitively based content-area instruction in science, mathematics, and social studies. CALLA teaches students the academic language skills and learning strategies they need to succeed in content areas and can also help the English-dominant but still limited English proficient bilingual student acquire these types of language skills. The approach addresses the need for English language development in the four language skill areas of listening, reading, speaking, and writing. CALLA is designed to supply added support for English language development among LEP students and is not a replacement for experience in mainstream classes.

CALLA is the result of an interdisciplinary effort to improve the education of limited English proficient students in U.S. schools. We plan to continue developing, refining, adapting, and testing our model in the hope that CALLA can make a significant contribution to the present and future needs of our growing minority-language school population.

Programs based on CALLA are being implemented in several school districts. As teachers and program directors work on their own to develop a CALLA-based instructional approach, we hope that they will let us know how CALLA works for them so that we can incorporate their ideas and suggestions as we continue to develop and refine our model. ■

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APPENDIX

Learning Strategy Definitions

Learning strategy	Definition
	Metacognitive strategies
1 Advance organization	Previewing the main ideas and concepts of the material to be learned, often by skimming the text for the organizing principle
2 Organizational planning	Planning the parts, sequence, main ideas, or language functions to be expressed orally or in writing
3 Selective attention	Deciding in advance to attend to specific aspects of input, often by scanning for key words, concepts, and/or linguistic markers
4 Self monitoring	Checking one's comprehension during listening or reading or checking the accuracy and/or appropriateness of one's oral or written production while it is taking place
5 Self evaluation	Judging how well one has accomplished a learning activity after it has been completed

Cognitive strategies

1 Resourcing	Using target language reference materials such as dictionaries, encyclopedias, or textbooks
2 Grouping	Classifying words, terminology, or concepts according to their attributes
3 Note taking	Writing down key words and concepts in abbreviated verbal, graphic, or numerical form during a listening or reading activity
4 Summarizing	Making a mental, oral, or written summary of information gained through listening or reading
5 Deduction/induction	Applying rules to understand or produce the second language or making up rules based on language analysis
6 Imagery	Using visual images (either mental or actual) to understand and remember new information
7 Auditory representation	Playing back in one's mind the sound of a word, phrase, or longer language sequence
8 Elaboration	Relating new information to prior knowledge, relating different parts of new information to each other, or making meaningful personal associations with the new information
9 Transfer	Using previous linguistic knowledge or prior skills to assist comprehension or production
10 Inferencing	Using information in an oral or written text to guess meanings, predict outcomes, or complete missing parts

Social affective strategies

1 Questioning for clarification	Eliciting from a teacher or peer additional explanation, rephrasing, examples, or verification
2 Cooperation	Working together with peers to solve a problem, pool information, check a learning task, model a language activity, or get feedback on oral or written performance
3 Self talk	Reducing anxiety by using mental techniques that make one feel competent to do the learning task

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Yes, Talking!: Organizing the Classroom to Promote Second Language Acquisition

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Recent research into the processes of children's first and second language development has yielded a number of insights which have been combined to create the communicative language teaching model. This model should be useful to English as a second language (ESL) teachers, both in planning their own instruction and in advising the increasing numbers of regular classroom teachers with limited English-speaking (LES) students in their classes. This article summarizes the central assumptions of the communicative language teaching model and specifies the potential difficulties that regular classroom teachers may face in adopting it. It then presents seven criteria to be used in organizing communicative classrooms and describes specific applications of these criteria to decisions about organizing classroom interaction and the physical environment.

INTRODUCTION

Limited English-speaking children have long been a part of the educational scene in English-speaking countries around the world, but only in the last 15 to 20 years has a clear national awareness evolved in the United States regarding the specific learning needs of these students. In the late 1960s and early 1970s, U.S. legislative and judicial mandates dealing with the rights of public school LES students to equal educational opportunity led to the creation of bilingual education programs specifically designed for LES students. Until very recently, the federal legislation authorizing and funding these programs has required some form of instruction in two languages (the students' native language and English). Money for bilingual education programs has gone primarily to programs and classrooms with concentrations of students from a single language background (e.g., Spanish/English programs in Texas, Vietnamese/English programs in New York and California). With some notable exceptions (e.g., the Culver City, California, Spanish immersion program and the Fairfax County, Virginia, ESL program), second language instruction in these programs has been organized as a curricular subcomponent of the larger dual-language instructional model and has mainly consisted of formal, small-group instruction in the vocabulary and syntax of English (Alatis and Twaddell 1976, Donoghue and Kunkle 1979, Legarreta 1979).

In 1985, the demography, politics, and pedagogy of bilingual education in the United States are changing. Department of Education census projections (Oxford, Pol, Lopez, Stupp, Peng, and Gendell 1981) indicate that the number of LES students in the American population between the ages of 5 and 14 will continue to rise dramatically for at least the remainder of this century. No longer are LES students concentrated in a very few states; rather, linguistic minority households are now found in communities across the country, in places where such differences have never existed or have been able to be ignored in the past. This trend has resulted in a much wider and a much more diverse distribution of LES students in the public schools than ever before, with more and more school systems each year facing the enrollment of LES students from several different language backgrounds in various grade levels and schools.

As the numbers of LES students and the schools receiving them are increasing in the United States, educational programs in general are being trimmed. The prevailing federal as well as local philosophy appears to be to "mainstream" (to place in the regular school program) students with "special needs," including LES students. With regard to bilingual education, the 1984 federal legislation reauthorizing the funding of bilingual programs was amended to give local school systems much wider discretion in their choice of permissible instructional techniques, including those not making use of the students' native languages. Under these revised regulations, programs placing LES students in regular school classrooms with instructional aides or resource teachers available to assist the regular classroom teachers are eligible for federal bilingual education assistance.

Together, these developments present ever-increasing numbers of regular classroom teachers and other public school personnel, who have little special training and few programs and materials, with the challenge of meeting the educational needs of LES students. ESL teachers, bilingual educators, and other ESL professionals are thus presented with a double challenge: to maximize their own language instruction and also to make instructional recommendations, based on what is known about children's second language acquisition, to other educators who have been charged with meeting

LES students' needs. This article has been written to assist ESL professionals in meeting this double challenge.

THE GOOD NEWS: THE COMMUNICATIVE TEACHING MODEL

Fortunately, the recent literature examining the processes of language development (L1 and L2) has yielded a number of new insights which have the potential for being transformed into instructional practices for assisting LES students in both the ESL and regular classroom. Beginning in the late 1960s, researchers studying the language development of both young L1 learners (e.g., Snow 1972, Clark 1973, Shatz and Gelman 1973, Wells 1974, Cook-Gumperz and Gumperz 1976) and young L2 learners (e.g., Fantini 1976, Fillmore 1976, Genishi 1976, Cummins 1979) began to shift the primary focus of research from the syntactic dimensions of linguistic performance to the semantic and social/contextual dimensions of language comprehension and performance. As several writers (e.g., Berko-Gleason and Weintraub 1978 for L1 development and Lindfors 1980 for L2 development) have already noted, this shift has resulted in a substantial reconceptualization of how children (and perhaps all language learners) approach the language learning task. Earlier theories of children's language development were either strongly nativist (i.e., children acquire language through mere exposure and through the activation of an innate "language acquisition device") or strongly behaviorist (i.e., children develop language by having their verbal behavior conditioned and shaped by parents and other adult teachers). Increasing evidence from recent multidimensional, qualitative studies suggests that children's language development is a strongly interactive process, one which relies not only on specific (and perhaps innate) cognitive and linguistic mechanisms, but also on the child's active participation in a linguistic environment attuned to the child's communicative needs.

This interactive, communicative view of language development is expressed in a number of different forms today, ranging from those (like the social-interactive theories of Snow 1977 and Wells 1981) which place slightly more emphasis on linguistic input and what children *take from* their linguistic environment and the communicative encounter to those (like the "creative construction" theory of Dulay and Burt 1974) which place slightly more emphasis on cognitive/linguistic mechanisms and on what children *bring to* the linguistic environment and the communicative encounter. This view of language development has in turn been accompanied by a substantial reconceptualization of the whole notion of linguistic competence and language proficiency, with "language proficiency" being replaced by the wider construct of "communicative competence" in both the theoretical and popular literature.

As Savignon (1983) and others have pointed out, an interactive, communicative ("one learns to communicate by communicating") view of the language learning process has been around for centuries. Several instructional applications of the communicative view have been proposed for adult and child L2 learners, for example, Curran's (1976) Counseling-Learning, Lozanov's (1979) Suggestopedia, and the Natural Approach (Terrell 1982, Krashen and Terrell 1983). Discussions of the theoretical assumptions and the teaching practices of a communicative model of language instruction abound in the current professional literature, including the pages of this journal (e.g., Taylor 1983, Nattinger 1984, Richards 1984). Without attempting to present a comprehensive review of those discussions or to resolve any ongoing theoretical and methodological controversies, this article summarizes the assumptions of the general communicative model of language development and language instruction that most directly apply to promoting L2 development in elementary school classrooms. These assumptions then provide the theoretical framework for various practical recommendations.

The key assumptions of the communicative language teaching model for elementary classrooms are as follows:

1. Children learn language as a medium of communication rather than as a curriculum subject with sets of isolated topics, facts, or skills; thus language is viewed as a verb (doing language, or communicating) rather than as a noun (knowledge of a language). Similarly, language proficiency is defined as speakers' successful accomplishment of their communicative intentions across a wide variety of social settings. This is often referred to as communicative competence.
2. "Successful" communication, as used above to define language proficiency, includes taking one's respondent(s) into account, both as a sender and as a receiver of a message. Wells (1981) refers to this important dimension of language proficiency, or communicative competence, as "establishing intersubjectivity." As he explains:

   > Any act of linguistic communication involves the establishment of a triangular relationship between the sender, the receiver and the context or situation. The sender intends that, as a result of his communication, the receiver should come to attend to the same situation as himself and construe it in the same way. For the communication to be successful,

> therefore, it is necessary (a) that the receiver should come to attend to the situation as intended by the sender; (b) that the sender should know that the receiver is so doing; and (c) that the receiver should know that the sender knows that this is the case. That is to say they need to establish *intersubjectivity* about the situation to which the communication refers (1981:47).

Wells also maintains that successful communication can involve written as well as oral collaboration, the writer being the sender and the reader being the receiver. Thus for many proponents of the communicative teaching model, becoming a successful communicator in the L2 is synonymous with becoming "literate" in the L2. These theorists also view the processes of listening, speaking, reading, and writing as best developed simultaneously (e.g., Goodman, Goodman, and Flores 1979, Searfoss, Smith, and Bean 1981, Hudelson 1984).

3. Children learn language (i.e., how to communicate successfully) through purposeful interaction with the L2 environment. This purposeful interaction involves exposure to language as communication as well as opportunities to practice language as communication in a wide variety of contexts.
4. The language as communication (or input) that children are exposed to in the L2 environment will be most useful to them in learning to be successful L2 communicators if it is meaningful and interesting, or, as Urzúa (1985) might refer to these two qualities in combination, if it is "real." Real input is language as communication that a) is largely able to be understood by children—what Krashen and his colleagues call "comprehensible input" (Dulay, Burt, and Krashen 1982, Krashen and Terrell 1983); b) is closely tied to objects and enterprises in the children's world that they may simultaneously and subsequently use to express their own meaning intentions—what Brown (1973) calls the "here and now"; c) is adjusted to take into account children's previous linguistic experience (i.e., what and how they can communicate in their native languages as well as what and how they are presently able to communicate in the L2); and d) takes into account children's previous cognitive, social, and cultural experiences.
5. As the last point implies, children bring a variety of backgrounds and lived experiences to the L2 encounter. These lead them to use different socioaffective as well as cognitive approaches to the L2 development task. At present, none of these approaches may be deemed inherently superior to the rest, although each may have different implications for instruction.

6. Children's L2 development is a holistic process, that is, children use all of their available resources—linguistic and nonlinguistic, internal (cognitive, affective) and external (social, environmental)—to become successful L2 communicators.
7. Children's L2 development is facilitated by a comfortable classroom atmosphere, that is, one which encourages and celebrates efforts at communicating, one which focuses on the meaning of utterances rather than on their form, and one which treats errors as a normal part of the L2 acquisition process.

THE BAD NEWS: THE DIFFICULTY OF IMPLEMENTING THE COMMUNICATIVE MODEL

Calling communicative teaching a model implies that its assumptions encompass a comprehensive new method rather than only a new syllabus or adjustments in the old one (Yalden 1982). Unlike many teaching approaches or curriculum packages, the communicative teaching model does not require large purchases of special textbooks and equipment or the setting aside of special blocks of class time to "teach" it to segregated groups of students. What it *does* often require is an extensive reconceptualization of the overall instructional process by the teachers who put the model into operation and by the parents, administrators, and others who support them. Thus, the appeal of the communicative teaching model is diminished by the potential difficulty of its implementation and at the same time enhanced by the potential economy of its implementation.

The largest difficulty facing teachers attempting to adopt a communicative framework for their overall instruction is that they must deliberately overturn an enduring, stereotypical image of what a "good" U.S. public school classroom should be, an image realized in most U.S. schoolrooms today (Sirotnik 1983). Even those teachers who become totally convinced that the communicative teaching model is the right thing to use in their classrooms will probably find it necessary to alter other equally strong and well-developed teaching beliefs and teaching patterns emanating from the stereotype of the "good classroom." They will also have to explain the changes dictated by this "new" model to others.

"No Talking"

A recent U.S. television commercial illustrates the pervasiveness of this stereotype and its unwritten conventions as well as the various difficulties teachers face in attempting to alter it. The advertisement is for an electronic teaching-aid toy called "Speak 'n

Math," and in this particular commercial the comedian/actor Bill Cosby is the company's spokesman.

Now, one would surmise that the company that introduced Speak 'n Math (and its counterpart "Speak 'n Spell") was quite thorough in designing and developing the toy. The toy's primary function appears to be based on two well-grounded, cognitive-developmental principles, which are also a part of the communicative teaching model: 1) that learning is interactive and 2) that concepts and language are best learned in direct combination. Thus, in the case of Speak 'n Math, as the child taps out the components of an arithmetic problem, they appear on a tiny screen accompanied by an electronic voice naming them (e.g., "three," "plus," "two," and so on), and the child's answer to the problem is also orally evaluated by the electronic voice ("Correct; very good" or "Incorrect; try again").

But now let us examine the scenario in which this communicative toy is presented. The commercial opens on Cosby sitting at what appears to be the rear of an elementary school classroom, with his back to the children and the teacher, who are all busily engaged in what children and teachers do. How is this classroom scene arranged? (Readers might wish to imagine the scene for themselves before proceeding.) The students are all sitting at their own private desks, and the desks are all arranged in rows facing what appears to be the front of the classroom. There, awaiting their undivided attention, is the teacher, positioned at a large blackboard. Who is the teacher? The teacher is a woman, advancing in years, with spectacles and white hair arranged in a bun, and with a pointer and chalk in her hands. What does the teacher do? She commands the continued attention of the students by writing bits of information on the blackboard and by calling on a succession of students with upraised hands who take turns responding to her questions and other solicitations.

In this setting, Cosby begins his message about the wonders of Speak 'n Math. In a voice barely above a conspiratorial whisper, he explains how the small machine operates and promises that it will make learning math facts easier and more fun. After the commercial cuts away to provide specific product information, the scene returns to Cosby delightedly trying out the Speak 'n Math toy, pushing the buttons and listening to the electronic voice. Temporarily forgetting his whereabouts, Cosby raises his voice excitedly to urge us to buy this "neat" toy and try it out! At that very moment the commercial ends with a shot of the stern visage of the teacher, poking Cosby's shoulder and firmly intoning (much to the children's merriment and to Cosby's consternation) the sacred injunction of the U.S. public school classroom: "No talking!"

"The Way It Is" and "The Way It Spozed to Be"

The extraordinary irony of the Speak 'n Math commercial, and the premise on which its humor depends, is that its scenario directly contradicts the essence of the product it champions. In principle, the toy and the classroom share the same goal: to educate. The "joke" is that the classroom is the one place where the use of this educational toy is clearly forbidden.

Why is this contradiction so seemingly plausible that it appears in a message broadcast to millions of North American homes? Probably because the commercial is a reasonable depiction of life in schools (or at a minimum, in U.S. public schools) as it exists today: "the way it is." In this respect, it is an embodiment of the continuing misalignment of theory (in this case, the product) and practice (in this case, the classroom scenario) that exists in most U.S. schools. Certainly it may be doubted that most teachers today wear their hair in a bun, but it is much harder to doubt the practices depicted in the commercial, particularly the furniture arrangement, materials, and organization of interaction it portrays. We shall deal with these classroom components later.

Our fear is that this same commercial might also be a reasonable depiction of life in the school as most people today believe it *ought* to be: "the way it spozed to be" (Herndon 1965). In that respect it represents the considerable challenge facing those teachers who hope to use the principles bound up in the Speak 'n Math toy to organize their entire classroom. If our fear is well-grounded, deciding to adopt a communicative framework will not only require thinking in new ways about *how* classrooms are supposed to be, it will also mean working to develop understanding outside the classroom for *why* they are supposed to be that way. Although both enterprises are crucial and present their own difficulties, in our limited space we can only deal in a preliminary way with the former.

ORGANIZING THE COMMUNICATIVE CLASSROOM

It is becoming increasingly apparent that the organization of the social environment of the classroom is under the control of the teacher and has important effects on the language development of students (Cathcart, Strong, and Fillmore 1980, Fillmore 1982, Johnson 1983, Enright 1984, Wells and Wells 1984). This is evident when the classroom depicted in the Speak 'n Math commercial is contrasted with classrooms where the communicative teaching model is being implemented (called hereafter "communicative" classrooms).

Communicative classrooms look different from other classrooms—they are filled with pictures and posters and interesting junk (otherwise known as realia and concrete referents). Often, communicative classrooms smell different from other classrooms—if, for example, a cookie-baking experiment has succeeded or a sulfurous science experiment has failed. Above all, communicative classrooms sound different from other classrooms—at one time reverberating with a panoply of different voices and conversations, at another time echoing with the combination of many voices into a single, larger one.

The primary reason for this contrast between communicative and other classrooms is that teachers who have adopted a communicative framework for their overall instruction make continual, conscious use of the *double learning potential* of every event in the daily life of the classroom. In accepting the first assumption of the communicative teaching model that language is best learned as a medium of communication rather than as a subject, teachers in communicative classrooms also accept the notion that second language instruction may be extended to the overall processes of classroom interaction. Thus, in communicative classrooms, the cleaning up at the end of a messy art project is viewed as having much the same language-learning potential as the art project itself in that both events require some use of language and interaction to exchange information and to accomplish specific goals. Teachers in communicative classrooms then organize and conduct these two very different events (and all other classroom events) with an eye toward exploiting their language-learning potential in addition to accomplishing their original purposes. In short, these teachers make communication a central goal and operating principle in their classrooms, even if doing so means relegating certain other goals and principles (e.g., tidiness, quiet) to less central positions.

As the previous discussion suggests, the transformation of any given classroom into a communicative classroom involves making changes in the way the classroom is organized before the students arrive for class as well as making changes within classroom events as they are being conducted when students are present. The remainder of this article is devoted to a discussion of the former organizational changes, beginning with some organizational criteria.

Criteria for Organizing the Communicative Classroom

The key theoretical assumptions of the communicative language teaching model may be translated into seven criteria for organizing instruction across the curriculum. We will briefly outline these seven criteria and then examine their application to organizing classroom interaction and arranging materials and the physical environment.

Criterion 1: Organize for collaboration. If language is thought of as a medium of communication and is learned through purposeful interaction and exposure to real input, then teachers must organize their classrooms to facilitate collaboration. Collaboration signifies *two-way* classroom experiences in which learning takes place through the participation of teachers and students together. In the more ubiquitous one-way classroom experience, learning takes place through teacher exposition. Collaboration also signifies students' learning and interacting with other students as well as with adult instructors. What may be "cheating" in the regular classroom is "helping" and "working together" in the communicative classroom. Finally, organizing for collaboration means providing more opportunities for children to practice and achieve the intersubjectivity that is an integral part of successful communication. As just one illustration of this criterion, rather than merely providing a full-group lecture on mammals and reptiles, teachers might have groups of students discuss and categorize sets of animal photos and explain their groupings to the rest of the class.

Criterion 2: Organize for purpose. If children learn language through collaborating with others in purposeful activity, then teachers must organize classroom activities that have specific purposes. Activities in the communicative classroom get something done: They result in a play performance or a bean harvest or the right-sized gerbil pen, in contrast to a report on the components of theater, a choral science reading, or a dittoed sheet of measurement problems. None of these latter activities is in itself inappropriate for use in the communicative classroom, as long as it is embedded in a larger unit or plan. Using this criterion, teachers must also plan tasks that have distinct purposes rather than creating extrinsic reasons for the completion of tasks, such as distant goals and rewards ("You'll need this for high school") or fear of adult authority ("You'll do this because I say you will").

Criterion 3: Organize for student interest. If the experiences and the input provided to children are more useful when they are interesting, then teachers must organize their classrooms with students' interests in mind. In the communicative classroom, it is not enough to plan the school year around adults' goals and interests, although these certainly need not be sacrificed to incorporate students' interests into the curriculum. Teachers must also plan activities that engage students fully in their own learning. This criterion should be paired with

Criterion 2 (organize for purpose); both the topics and the purposes teachers choose for their classroom activities should be ones of interest to their students. Using Criteria 1 and 2, it would seem that having pairs of young students measure the heights of various schoolroom objects would be better than having students complete measurement worksheets. Using Criteria 1, 2, *and* 3, it would seem that also having young students guess their own and a partner's height and then measure each other to see how close their guesses were would be even better.

Criterion 4: Organize for previous experience. If children apply diverse linguistic, social, and cultural experiences to the language learning enterprise, then teachers must organize their classrooms to facilitate students' use of these experiences. Instead of waiting for students to adapt themselves as best they can to the new linguistic and cultural environment, teachers in communicative classrooms must adjust their own communication patterns and environment to permit the "bridging" (Ventriglia 1982) of the two worlds. At a simple level, teachers mindful of this criterion would use maps of every child's home country during a unit on maps. At a more complex level, teachers applying this criterion during a reading-group session would adjust their turn-taking patterns and other elements of participation to accommodate those patterns that LES children are accustomed to following (e.g., Au and Jordan 1981). In this way, teachers could introduce new language and ways of communicating while introducing new content.

Criterion 5: Organize for holism. If children use all their available resources to learn language, then teachers must use integrated rather than segmented curricula and learning activities in their classrooms. Teachers in communicative classrooms speak of developing "literacy" and "communicative competence" rather than of teaching "reading," "writing," and "language arts." Targeted learning goals, whether the development of skills such as composition and measurement or the development of knowledge such as the forms of punctuation and the kinds of measuring devices, should be taught in combination with one another. Children in communicative classrooms might hear a fairy tale about measuring; see a teacher demonstration of measuring; talk about, try out, and record a measuring project; and read about and do more measuring on their own—all as part of fulfilling a school-district objective concerning measurement in yards and meters.

Criterion 6: Organize for support. If children learn language in a pleasant and comfortable atmosphere, then teachers must organize their classrooms to support children's development of communication. This means that teachers must clearly indicate the value they place on children's efforts to communicate. They must provide multiple opportunities for children to succeed in their communicative efforts and make sure that public (*i.e.*, in front of the entire class) requests for communication are comfortably within their students' communicative repertoires. Teachers must also provide multiple opportunities for children to fail in their communicative efforts. These opportunities should be limited, however, to more private and functional situations, where failures, whether grammatical errors or socially inappropriate utterances, can be given prompt feedback as a natural and necessary part of the situation. It is one thing for LES children to feel the need to clarify their pronunciation because their partner at the other end of a walkie-talkie cannot quite understand them; it is quite another for them to feel the need to clarify their pronunciation because the entire class is listening and giggling as they recite the poem of the day.

Criterion 7: Organize for variety. If having a second language is defined as being able to communicate successfully across a wide variety of common social settings and if children learn language through exposure to and practice of communication in diverse settings, then teachers must organize their classrooms with a variety of materials, purposes, topics, activities, and ways of interacting in mind. In communicative classrooms, this criterion is applied in combination with the other six. For example, teachers organize activities with a variety of forms of collaboration; they organize several activities with different purposes appealing to diverse student experiences; and they organize a range of familiar and novel experiences in order to utilize and augment their children's previous cultural experiences. The classroom illustrations in this section are but a small sample of the multitude of activities that might be found in the communicative classroom.

Applying the Seven Criteria to Organizing a Communicative Classroom

In applying the seven criteria to their own situations, teachers may find it helpful to begin by looking at their organization of interaction across the regular curriculum. They can then proceed to making decisions about materials and the arrangement of the physical environment that will complement that organization. It is imperative that in doing this, teachers examine and adjust their decisions about what the general rules governing classroom interaction should be as well as decisions about what the classroom events operating under those rules should be (Enright 1984).

Classroom rules: Yes, talking! All teachers have a set of rules for structuring classroom interaction in general. These rules are usually determined before students enter the classroom and are then adjusted slightly during the first few weeks of the school year to take into account specific group characteristics. The rules are quickly internalized by students and become tacit regulators of interaction for both the teacher and the students for the rest of the year.

We have seen that in the classrooms represented by the Speak 'n Math commercial, the primary rule governing classroom interaction is "No talking." For teachers who wish to apply the seven criteria to their classroom rules, just the opposite primary rule must be adopted: "Yes, talking," or, in the terminology of the criteria, "Yes, collaboration." Teachers who wish to use the communicative teaching model must not only permit talking and other forms of collaborating in their classrooms; they must dynamically encourage all forms of collaboration in daily classroom life. By mandating collaboration as a classroom behavior, teachers will progress significantly toward making the regular classroom a useful place for LES children to learn language.

Other classroom rules may be similarly adapted to support the criteria for organizing the communicative classroom. Whereas the rules "Don't get out of your seat" and "Do your own work" violate the seven criteria, the rules "Help each other without bothering each other" and "Use everything you can to learn" support them. We are not suggesting here that individualized work and silent activities are inappropriate for the communicative classroom. "All talking" would be as problematic for LES students as "no talking." Nor are we suggesting that one perfect rule or set of rules exists for governing interaction across all classrooms. Teachers must develop rules that best suit themselves and their particular classroom situations. What we do suggest is that teachers should carefully examine their implicit, interactive expectations, as expressed in general classroom rules, and adjust them in light of the organizational criteria we have provided.

Classroom events. Classroom events are the segments of the interaction that teachers use to carry out their daily classroom agendas. These events are defined by their grouping (who is to participate), their tasks (what is to be done and learned), their participant structures (how students are to interact), their materials, their physical arrangement, and their locale. Most teachers have a specific array of events that they repeatedly use throughout the entire school year, and they give names to the events they use most often (e.g., seat work, reading group, free time, class meeting).

Once again, it appears that in U.S. classrooms of today (and, we suspect, in classrooms everywhere), the events used to organize interaction do more to repress than facilitate the practice and development of communication. Sirotnik (1983) identifies "teacher explaining, lecturing, and reading aloud" as the most common activity in U.S. public school classrooms, closely followed by "working on written assignments" and "preparation for assignments/instructions/cleanup" (24). Several investigators (Bellack, Kliebard, Hyman, and Smith 1966, Flanders 1970, Mehan 1979) have also identified the "lesson" as a predominant classroom activity or event. In general, a lesson consists of a teacher lecture followed by a series of turn-taking sequences involving teacher solicitations, student replies, and teacher evaluations of those replies. This is the classroom event that was depicted in the Speak 'n Math commercial. All of these events require an extensive amount of passive student participation, with uniformly small amounts of collaboration, individualization (including use of students' previous experiences), intrinsic purposes, use of the whole environment, maintenance of student interest, and support. By definition, the use of only two or three events to organize interaction throughout an entire year violates the organizational criterion of variety.

Teachers adopting the communicative language teaching model can manipulate all the various features of classroom events—grouping, tasks, participant structures, materials, and physical arrangement—to fulfill the seven organizational criteria of the communicative classroom. Let us illustrate this for just the first criterion, collaboration. Teachers can use the grouping attribute of the classroom event to have students occasionally develop full- and small-group reports, projects, and written assignments in place of individual activities. Placing five students together to write a play will provide opportunities for collaboration (and thus for language learning) that assigning an individual composition will not. Similarly, the teacher's joining an activity as one of the participants will markedly change the communicative requisites and the tenor of the discourse. (For a dramatic example of this, see Ventriglia's [1982] description of a teacher joining a tea party in progress).

The task of a given instructional event can also be manipulated so that collaboration is unavoidable; we call this "must" language. Imagine the collaboration and the language use that might occur if LES children were privately taught how to make a holiday art project and were then guided as instructional leaders to complete the projects with small groups of classmates! In like manner, asking the whole class or small groups of students to reach a consensus regarding the main cause of World War II and then to write essays on this topic would create "must" language that having the class write individual essays on the same topic would not.

The participant structures of an event can be adapted to require varying forms of collaboration. Contrast a teacher supervising pairs of students who are asking each other sets of study guide questions with a teacher asking those questions to a whole class and then calling on student volunteers. Even the participant structures of routine procedural events can be varied to create different forms of interaction and collaboration; for example, the usual one-way, full-group dismissal ("It's 3:30, so class is dismissed!") could occasionally be altered to require that each student provide a politeness formula (*May I be excused?*) or a patterned response to the same relevant question (e.g., *What book did you check out today?* or *What do you want to start tomorrow?*). (For further discussions and illustrations of participant structures, see Erickson and Shultz 1981 and Enright 1984).

The materials of an event can be used to create collaboration. Having only one pair of scissors for a group of four students working on a cut-and-paste activity creates "must" language all by itself.

Finally, the physical arrangement of an event can foster collaboration. Having children sit on the carpet and face the teacher, standing at a blackboard, creates a different set of communicative contingencies than having children sit in a circle with the teacher.

Once again, we are not implying that one single set of classroom events will magically meet all English-speaking and LES children's needs. Teachers must organize a set of events to meet their students' particular needs within the constraints of their particular curriculum. Indeed, it should be noted that curriculum objectives are *not* listed as one of the features of events that must be changed to make the classroom more communicative and useful to LES students. It is not *what* students study but *how* they study it that must be re-evaluated and adjusted in organizing events for the communicative classroom. We have merely provided some organizational criteria to guide those evaluation and adjustment endeavors.

The physical environment. As we have suggested, classrooms where the communicative language teaching model is being implemented will of necessity look different from other classrooms. Just as the classroom environment in the Speak 'n Math commercial is organized to support specific instructional assumptions and forms of interaction, so too must the communicative classroom environment be organized to support the assumptions and desired forms of interaction of the communicative language teaching model. This may be accomplished by applying the seven organizational criteria to decisions about how the classroom should be arranged and what it should contain. Figures 1 and 2 present diagrams of two communicative classrooms. Let us examine the differences between the communicative classroom environment and other classroom environments by contrasting these figures with the Speak 'n Math commercial's classroom.

FIGURE 1

One Possible Communicative Classroom Environment

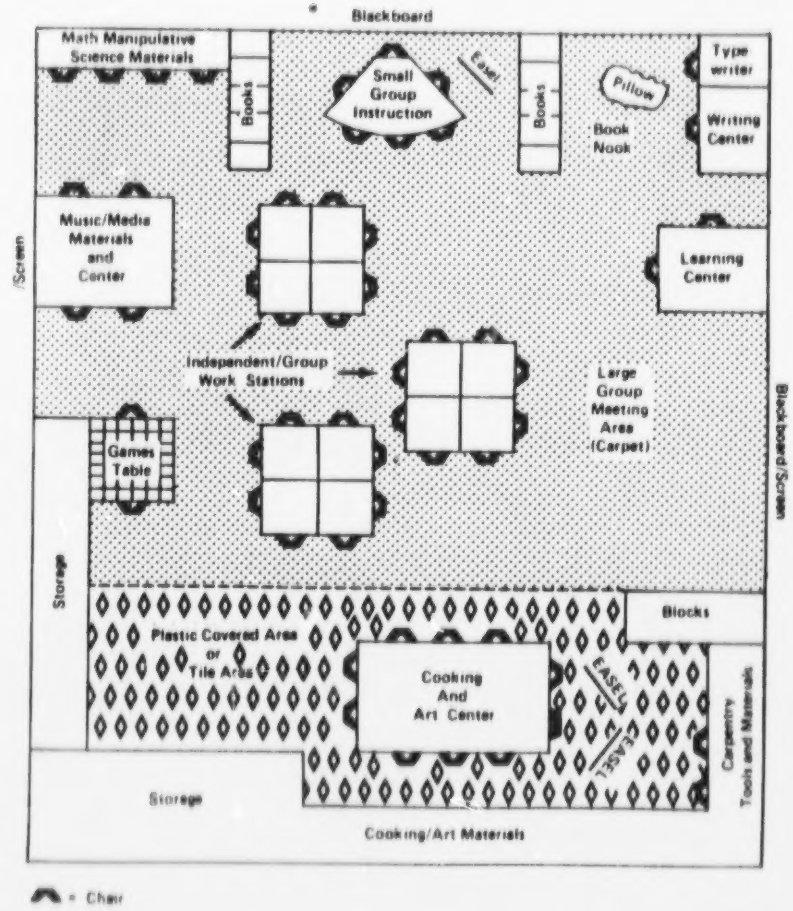
Blackboard
Math Manipulative Science Materials
Books
Small Group Instruction
Easel
Books
Pillow
Book Nook
Type writer
Writing Center
Music/Media Materials and Center
/Screen
Learning Center
Independent/Group Work Stations
Large Group Meeting Area (Carpet)
Blackboard/Screen
Games Table
Storage
Blocks
Plastic Covered Area or Tile Area
Cooking And Art Center
EASEL
EASEL
Carpentry Tools and Materials
Storage
Cooking/Art Materials
= Chair

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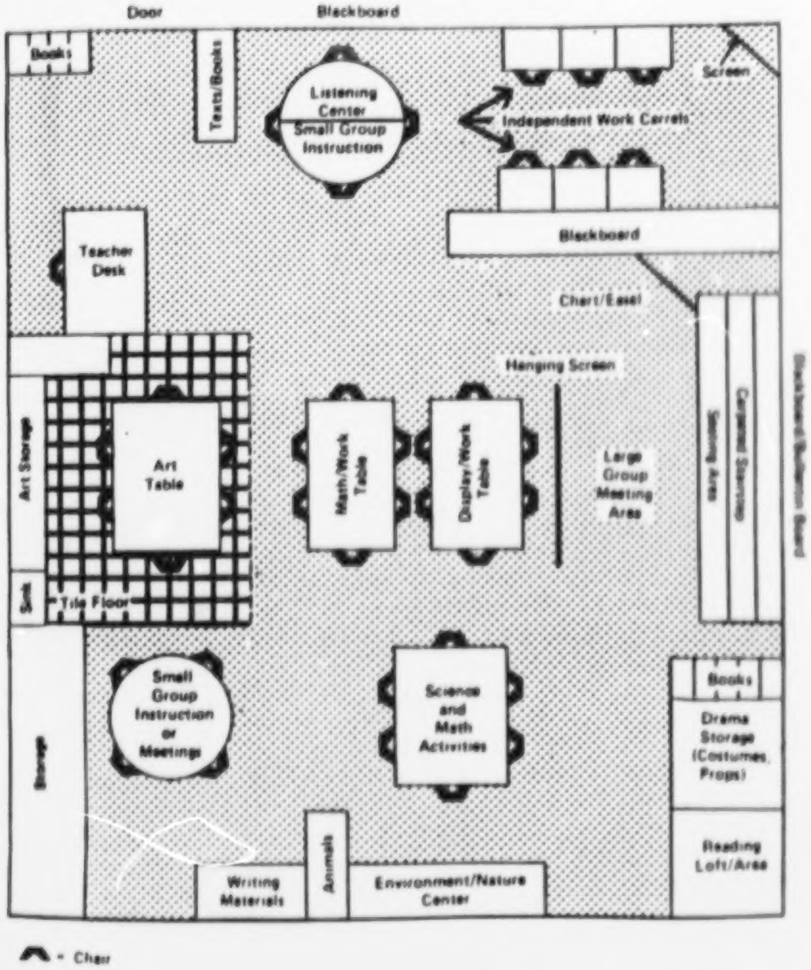
FIGURE 2

Another Possible Communicative Classroom Environment


Door
Blackboard
Books
Texts/Books
Listening Center
Small Group Instruction
Independent Work Carrels
Screen
Teacher Desk
Blackboard
Chart/Easel
Hanging Screen
Art Storage
Art Table
Math/Work Table
Display/Work Table
Large Group Meeting Area
Sitting Area
Carpeted Staircase
Blackboard/Bulletin Board
Sink
Tile Floor
Small Group Instruction or Meetings
Science and Math Activities
Books
Drama Storage (Costumes, Props)
Storage
Reading Loft/Area
Writing Materials
Animals
Environment/Nature Center
= Chair

First, communicative classrooms are more *flexible* than other classrooms. In the Speak 'n Math classroom, desks are more or less permanently arranged in rows, and the teacher's desk and the blackboard are placed at the front of these rows. This arrangement facilitates the organization of the rules and events previously described by focusing students' attention away from each other and toward the teacher or their private seat work. In contrast, the communicative classroom is potentially many interactive environments in one. Space and furniture are arranged to create opportunities for a single event to occur or for many events to occur at the same time in an orderly manner with minimal distraction. In addition, the various areas of the classroom are organized so that their usual purposes and the forms of collaboration that are to be used in them are clear (Enright and Gomez in press). Most communicative classrooms have signs around the room marking different areas, and teachers supply rules for how interaction may take place in these areas (e.g., in Figure 2, permissible drama/puppet theater interaction is different from permissible reading-area interaction). The furniture and materials of communicative classrooms are also movable so that new events and interaction can take place. Lighter, smaller furniture is preferred over heavy, unwieldy items. Also, much of the furniture and materials in communicative classrooms can be used by more than one person at the same time in order to permit the collaboration so necessary for language development. Thus in Figures 1 and 2, tables replace desks, or desks are moved together to create group work surfaces.

Communicative classrooms are also more *functional* environments than most other classrooms. In the Speak 'n Math classroom, the only materials present are textbooks, workbooks, pencils, and paper. Any other materials used in the classroom (such as art materials) are stored out of children's reach and are only immediately accessible to the teacher. In contrast, communicative classroom environments provide easy access to materials that can be used to accomplish a wide variety of tasks and purposes. For example, in the classrooms depicted in Figures 1 and 2, art materials are given their own prominent area because of their diversity of uses: to create puppet shows (language arts), dioramas (social studies), rocket and jet models (science and math), in addition to being used to create works of art. Most materials in communicative classrooms are stored openly, near where they are to be used (e.g., in Figure 1, supplies of paper, pencils, pens, and binding materials would be placed in the writing area; in Figure 2, headphones would be anchored to the listening-center table).

In addition to being more flexible and more functional, communicative classrooms also tend to be more *enticing* places for students

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to be. In the Speak 'n Math classroom, where teacher exposition and student seat work prevail, the walls tend to be unadorned, and materials are stored out of the children's sight to keep them from being "distracted" from the teacher and their work. Communicative classrooms are also organized to accommodate the use of teacher exposition (see the meeting areas in Figures 1 and 2) and student seat work (see the independent/group work stations in Figure 1 and the independent work carrels in Figure 2), but they are not organized exclusively for these kinds of events. As Figures 1 and 2 illustrate, many of the materials used in communicative classrooms are displayed and stored openly to encourage their use by children. Different kinds of enticing objects that encourage interaction are displayed and used in communicative classrooms, from games, cooking implements, and musical instruments (see Figure 1), to filmstrips, blocks, and items from the natural environment (see Figure 2). The walls of communicative classrooms—covered with posters, displays of students' work, directions for learning centers, and other signs—are similarly used to entice students into collaborating and learning. In short, there is a lot of interesting stuff to talk about in communicative classrooms, and classroom rules and events direct the ways in which to talk about that stuff.

Finally, communicative classroom environments tend to be more *student-owned* than other classroom environments. As the previous discussion illustrates, teachers in communicative classrooms involve children in every way they can in the pursuit of the adult instructional agenda. Materials in communicative classrooms are chosen and arranged to be accessible to students as well as to teachers, to be used by students as well as teachers, and to be used to accomplish students' ideas and purposes as well as teachers'. Many of the materials and displays in communicative classrooms are student-created, in the same way that many of the events in communicative classrooms involve students' direct participation. If any single generalization can contrast the Speak 'n Math classroom with the communicative classroom, it is that the former is primarily organized with teachers (and their ease, comfort, interests, and goals) in mind and the latter are organized with children (and their ease, comfort, interests, and goals) in mind.

CONCLUSION

In this article we have summarized some of the key assumptions of the communicative language teaching model and described some of the implications of those assumptions for organizing both the ESL and the regular classroom to assist the language development of LES children. Our work in this area is far from complete, and the discussion may have raised as many questions in readers' minds as it has answered. This may not necessarily be a bad state of affairs, however, if one accepts the notion that continual questioning and reflecting upon instruction are as beneficial to the teaching enterprise as adoption of any one particular model or another.

In organizing any classroom, communicative or otherwise, it is important for teachers to have a coherent set of assumptions about how teaching and learning proceed. In studying classrooms, it is equally important for researchers to take into consideration the specific implications of their discoveries for future educational practice. All too often in our specialized professional worlds, one or the other of these enterprises is neglected, to the detriment of students. If we are to continue to strive to improve instruction, then efforts to relate research and practice, however tentative or incomplete, must be given the same value and careful consideration that are presently dedicated to the two enterprises separately. We will be satisfied if this article has contributed in a small way to these efforts.

■

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Whole Language in TESOL

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American Language & Literacy

This paper presents key aspects of the whole language perspective; describes examples of whole language principles in practice in elementary, secondary, and adult ESOL programs; and reviews recent whole language research on second language development.

WHOLE LANGUAGE PRINCIPLES

The term *whole language* has become a popular, even bandwagon term for native speakers of English in elementary education and is beginning to be used in secondary and adult education (Goodman, Bird, & Goodman, 1991; "Special report," 1991). Whole language is both a theoretical perspective and a movement affecting both instruction and research. The movement grew from an original focus on the teaching of reading to native speakers of English; it grew to encompass writing and then the processes of teaching and learning, which in turn involve the roles of teacher and student. What began as a holistic way to teach reading has become a movement for change, key aspects of which are respect for each student as a member of a culture and as a creator of knowledge, and respect for each teacher as a professional. The movement has had its greatest impact in elementary schools and with L1 students and is only beginning to affect secondary and adult education.

In the field of TESOL we are starting to see "whole language" in articles, in book titles, and in convention presentations. Where does the term come from? What does it mean, both to its originators and to us in TESOL? What effect is it having on our teaching of English to speakers of other languages? In this article, I propose to address these questions by summarizing the key points of the whole language perspective; describing some examples of whole language principles in practice in elementary, secondary, and adult ESOL programs; and suggesting how the whole language perspective affects research in L2 development.

Background

The term *whole language* comes not from linguists but from educators—people like Harste and Burke (1977), Ken and Yetta Goodman (1981), and Watson (1989)—who began using it in reference to how English-speaking children become readers. (See "Whole language," 1989, for more detailed descriptions of whole language philosophy and history; see also Y. Goodman, 1989, 1991.) They asserted that language is a whole (hence the name), that any attempt to fragment it into parts—whether these be grammatical patterns, vocabulary lists, or phonics "families"—destroys it. If language isn't kept whole, it isn't language anymore. Harste and Burke (1977) first suggested the term when they described three different theories of reading: phonics, which presumed that reading was basically a process of turning letters into sounds; skills, which presumed that reading was basically a hierarchy of skills, including phonics, word recognition, and comprehension skills; and whole language, which defined reading as a psycholinguistic process (K. S. Goodman, 1967) in which readers interact with texts. Readers predict what comes next; sample cues from the semantic, syntactic, and graphophonic systems; and use their knowledge of the world, of the language, and their purposes for reading to interact with the text and to arrive at meaning (Harste & Burke, 1977).

These early leaders of the movement read the research in composition by Graves (1983), Calkins (1983, 1986), and Atwell (1987), and as a result, they enlarged their focus: Whole language proponents began to think of literacy as including both reading and writing. The researchers in composition were convincing in their focus on the processes of writing instead of on written products. Instead of looking at writing primarily as a means of demonstrating knowledge to a teacher, whole language proponents now viewed writing as a means of discovering for oneself what one thinks. In her address to TESOL in New York, Calkins (1991) moved even further, talking about how we use writing to create and recreate ourselves.

About the same time that the early whole language advocates were incorporating recent research in composition into their view, they began to read Louise Rosenblatt (1938/1976), who described reading as a process of *transacting* with text. In *The Reader, the Text, and the Poem*, Rosenblatt (1978) asserted that, instead of simply interacting, the reader and text "transact" (p. 17), and together create the poem. Rosenblatt also helped explain how individual interpretation of text (private meaning) related to a commonly accepted interpretation (public meaning), and she distinguished between "aesthetic" and "efferent" reading (p. 22)—reading for the experience and reading to find out. For most whole language educators, whose interest had been primarily the reading process, this focus on literature and its interpretation was a significant step. The research into the reading of children whose first language was not English (Goodman & Goodman, 1978) had confirmed that these readers' backgrounds strongly affect the meaning constructed from the page. Rosenblatt was convincing in arguing that we needed to look much more closely at *what* was being read—the text, at *why* it was being read, and at *how* the aesthetic possibilities could be explored. Today's whole language emphasis on literature study (Peterson & Eeds, 1990) and an appreciation of multiple interpretations owes much to the rediscovery of Rosenblatt. As Edelsky (1991) points out, the recognition of the validity of different interpretations promotes pluralism.

Edelsky, Altwerger, & Flores (1991) offer probably the clearest description of what whole language currently is and what it is not; *Whole Language: What's the Difference?* opens with "First and foremost, whole language is a *professional theory*, an explicit theory *in* practice. . . . Whole language weaves together a theoretical view of language, language learning, and learning into a particular stance on education" (p. 7). It is not a method, nor a collection of strategies, techniques, or materials although certain approaches and materials are characteristic of whole language classes.

Principles of Knowledge and of Language

This "professional theory in practice" is based in part on the belief that knowledge is socially constructed, rather than received or discovered. Traditionally, formal education has been viewed as a matter of transferring knowledge from the teacher's head and from textbooks into the students' heads. But if knowledge is constructed, there is no single right answer, either in the text or the teacher. More, the teacher, rather than transmitting knowledge to the students, collaborates with them to create knowledge. This is the foundation for the whole language emphasis on student choice and on collaboration.

A second basic premise is that the major purpose of language is the creation and communication of meaning. We use language to think: In order to discover what we know, we sometimes write, perhaps talk to a friend, or mutter to ourselves silently. We can think in other ways (for example, you can visualize Picasso's *Guernica* or recall the first notes of Beethoven's Fifth Symphony), but language is our primary way of creating meaning. Similarly, language is our primary means of communicating to others. An obvious corollary of this is the assertion that language is always used purposefully. TESOL professionals who are accustomed to functional syllabi easily understand and accept this corollary: They recognize the myriad functions of language and they may use those functions as the basis for organizing the information they present to students learning English as an additional language. An important difference between the whole language and the functional ESL curriculum is that the whole language curriculum demands that language functions always be authentic, always be meaningful. That is, an ESL class might practice some language used in apologies, even though no one in class is really trying to apologize to anyone else. A whole language perspective requires an authentic, "real" situation in which one person truly needs to apologize to another. (See Edelsky, 1987, for a full discussion of authenticity.)

Real is a byword in whole language classes. Notwithstanding the difficulties in defining authenticity, a commitment to real activities is an important component of the whole language perspective. Real activities are defined as those relevant to students' interests, lives, and communities. Activities designed to practice behaviors or skills that will someday be needed are not considered real under this model: Why ask students to engage in practice runs when they could be working on something immediately and directly relevant? Materials too must be real. Too often textbooks used in grades K–12 are written by committees of people who don't teach (and often have never taught), are purchased by other committees of people who may or may not teach, but seldom teach the classes which will use the textbooks, and are read by teachers and students in classrooms far removed from both publisher and textbook selection committee. Textbooks to teach reading, "basals," have come under attack by Goodman, Shannon, Freeman, & Murphy (1988) and Shannon (1989, 1990) and others. These researchers have convinced many teachers and school administrators to use funds allocated for textbooks and consumable workbooks for trade books of children's literature, both fictional and nonfictional. California's decision to replace basals with a literature program in all schools statewide has given strength and support to teachers who want to convince their administration and school boards to try the same. Whole language programs require well-stocked large classroom libraries from which students can select what they want to read, both in free reading time and in literature study. In whole language classrooms students read real books.

Writing too must be real. The students are invited to write for themselves and for others, rather than just for the teacher. Research on the writing of L1 school children (Atwell, 1987; Calkins, 1983; Graves, 1983) has convinced many teachers that it is the processes, not the products, of writing that deserve their attention. As a result, in whole language classes students select their own topics, their own audiences, and write for their own purposes and to their own standards. The writing workshop approach postpones the correction of errors to the prepublication step of editing; this frees both students and teacher to concentrate on matters of content, organization, and style. In a process approach to composing, students and teacher can look at successive drafts with an eye towards increasing clarity, or deepening mood, or using language more vigorously or artfully. Language's "aesthetic qualities . . . the musicality, design and balance and symbolism that give pleasure to language users" (Edelsky et al., 1991, pp. 13-14) allow language users to play with language and to revel in the creative possibilities that range from jump-rope rhymes, through puns and limericks and songs, all the way to *Hamlet*.

Whole language advocates recognize that language is both individual and social. "Who and what we are is determined in great part by our language. Since we are all uniquely individual with an almost infinite number of different life experiences, our oral and written language often reflects those differences" (Kazemek, 1981, p. 1). Both where we grew up and which social class we first belonged to mark our speech; our education and our profession show in both our speech and our writing. One obvious application of this principle is the acceptance (not just tolerance) of nonprestige dialects. When writing teachers support their students in finding and using their own voices, they are putting this principle into practice.

Language is social. It makes a difference who says what to whom, how, and why. What is the social relationship of two people communicating? What are their purposes? What is the situation? The language used by a person on a factory floor expressing anger at perceived incompetence differs, depending on whether the individual is speaking *to* the supervisor or *is* the supervisor. Language use is always in a social context, and this applies to both oral and written language, to both first and second language use. Applying this principle to the whole language class results in paying attention to audience and to context: Both speakers and writers are urged to consider their audience, the person(s) they are addressing; both are reminded to consider the setting in which their messages will be received.

Part of the wholeness of whole language is the inclusion of literacy as a part of language. Because reading and writing are not separate systems from language, in a literate society, using written language is as natural as using conversation, and the uses of written language develop as naturally as do the uses of oral language (Goodman & Goodman, 1981). The four language modes—speaking, writing, listening, and reading—are mutually supportive and are not artificially separated in whole language classes.

Many traditional ESL programs have separated the language modes, offering classes in reading, in writing, in conversation, in pronunciation, in listening. Whole language classes use all four modes, but may offer ESL students the opportunity to zero in on the aspect of language they most need help with. I remember a Yemeni seaman I worked with in Detroit years ago: Ahmed[1] spoke English fluently with near-native pronunciation, but in English he could read only the most common of environmental print signs (STOP, McDonald's) and could write only his name. Ahmed wanted to pass the Seaman First Class test so he could move up in his chosen profession; for him, tutoring in written English seemed the best option. We used his excellent oral English as the base; he dictated his text to me using the language experience approach (Rigg, 1991). Recently a Vietnamese friend of mine, a young woman who writes so beautifully in English that she's been published several times, spoke to an audience of teachers about her language learning experiences; as I listened and watched the puzzled faces of the audience, I wished she had access to a tutor who would use her writing as the basis for work in pronunciation.

Principles of Teaching and Learning

The principles of knowledge and of language lead to principles of teaching and learning. Primary among these is the principle that curriculum and instruction need to be both meaning-centered and student-centered. *Meaning-centered* means that oral and written language experiences must be purposeful, functional, and real. Reading and writing activities must serve real purposes (e.g., to entertain, to convince, to explore, to excuse oneself, and so on). Choice is vital in a whole language class, because without the ability to select activities, materials, and conversational partners, the students cannot use language for their own purposes. So teachers "issue invitations" to students, offering a choice of activities and materials. Authenticity, as defined by Edelsky (1987), is necessary. Whatever the students are doing, whether suggested by themselves or by the teacher, is for their own purposes. If students are writing

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[1] Student names have been changed.

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letters, for example, it is because they want to communicate through writing with the people they are writing to; the letters will be mailed, and (the writers hope) answered. They are not writing pretend letters to practice the form of a friendly or business letter.

Student-centered means building the curriculum in the class with and for the students (Nunan, 1988). A major aspect of the whole language view is respect for each student, with all that that entails in terms of respect for the student's language, home, and culture. This contrasts strongly with the typical traditional class, whether elementary or university level: The standard curriculum in public schools is usually determined by committees of people who have never met the people who actually use the curriculum—the students and teachers. Curriculum committees at the school district level and at the state department of education level do not know any of the students; legislators are even further removed from the people their educational decisions most directly affect.

Related to the principle of respect for the student, and involvement of the students in determining their own curriculum, is the principle of respect for the teacher. A whole language perspective advocates mutual respect among professionals. Typically, in whole language programs, teachers meet as committees to decide on curriculum, on evaluation, and on the management of their school; they choose themselves what books will be on the classroom shelves, deciding themselves how to spend both book and nonbook funds. The training and experience of professional teachers best qualify them to judge what the students in their rooms need and want. Only teachers have close daily contact with the students. Only they are able to determine what materials and activities are appropriate for their students at any time. They know what to offer. Also, their choice is as vital as the students'; if the teachers don't have choices, they cannot offer much choice to their students.

This principle of respect for the teacher, coupled with students' obvious delight in student-centered, meaningful activities, has helped make whole language a large-scale movement in Australia, Canada, and the U.S. Teachers have joined together in peer support groups, often calling their group Teachers Applying Whole Language, or TAWL. These groups are loosely affiliated across Canada and the U.S. through the Whole Language Umbrella, which drew 2,000 to its first conference in the summer of 1990 in St. Louis, MO, and almost that many in August 1991 to Phoenix, AZ. It is not exclusively a grass-roots teachers' movement, since it was started and is still led by teacher educators at various universities. These teachers and teacher educators have held "a whole day of whole language" for the last 2 years at the national conferences of both the International Reading Association (IRA) and the National Council of Teachers of English (NCTE). The movement has become so widespread that it has become a bandwagon: Now a wide variety of publishers and presenters have adopted the label whole language and are using it to market materials and workshops that 10 years ago were labeled back to basics. (See recent issues of IRA's *Reading Today* newsletter for sample ads.)

One more indication of respect for the teacher is that teachers are increasingly recognized as researchers. Bissex and Bullock's (1987) collection of case studies by classroom teachers typifies the sort of research whole language teachers are undertaking and publishing. (Whole language research is discussed later in this paper.)

EVALUATION

Whole language teachers often protest being required to administer standardized tests such as the Iowa Test of Basic Skills (ITBS), arguing that those tests do not accurately describe their students' abilities, nor do they predict their students' performance. Teachers question not only what standardized tests are testing but what they are *teaching* the students. In my state of Arizona, every child must take the ITBS every year, whether the child is a speaker of English, Spanish, Navajo, or any of the several other languages in the state. (English arrived in Arizona about 150 years after Spanish and thousands of years after First Nation languages.) Teachers in several schools report horror stories of children becoming physically ill from the stress of taking the ITBS. They also tell bitterly funny stories of instances in which the ITBS score indicated a child could not do something—simple addition, for example—when the teacher had ample evidence that the child could. My own favorite story came from a member of a local school board who had insisted on basing teachers' and principals' salaries on schools' ITBS scores: This man's daughter received one of the lowest ITBS scores in the district—she had lost her place on the answer sheet.

Evaluation, like curriculum, needs to be meaning-centered and student-centered. Assessment and evaluation of whole language education must itself be holistic (Goodman, Goodman, & Hood, 1989; Harp, 1991). We cannot assess growth by using standardized or criterion-referenced tests which measure isolated, partial, or purposeless language skills (Taylor, 1990). Whole language classrooms typically use student self-evaluation as part of ongoing and informal assessment which allows the instructor and student to document growth and to plan for future instruction. Because students themselves establish their goals, students themselves monitor their progress (Brindley, 1986). Holistic assessment in grades K–12 takes place with teachers keeping narrative records of their "kidwatching" (Y. Goodman, 1985) and portfolios of student writing and reading. Teachers' records are based on

> conferring with the students about their reading and writing, noting difficulties, efficient strategies, personal goals, types of texts they need or want to read and write, and so on; preparing a checklist of specific things that the teacher and the student want to accomplish during a specific time period; collecting samples of a student's reading (perhaps on tape, using some type of miscue analysis) and writing and charting growth over time. (Kazemek, 1989, p. 5)

WHOLE LANGUAGE IN ESOL CONTEXTS

Elementary Education

The preceding discussions have referred to L1 speakers. Do whole language principles hold true in L2 learning? Whole language advocates believe they do, citing two arguments:

1. L2 can develop much as does L1. L2 classes should offer a language-nurturing environment, paying attention to doing things *with* language rather than to language itself (Krashen & Terrell, 1983). This includes literacy as well as oral language.
2. L2, like L1, develops through interaction with peers, rather than through imitation of a teacher's model or through formal study. The holistic ESOL class develops a strong sense of community in the class and school, and uses a variety of collaborative learning activities.

The most obvious place to find whole language in ESOL practice is in elementary classrooms in schools where many of the children speak English as an additional language. Else Hamayan (personal communication, 1988) calls these students "potentially English proficient (PEP)" kids—in contrast to the U.S. government's labeling of them as limited English proficient. I find the terms *LEP* and *limited speakers* derogatory; alternatively, one might label limited English speakers those handicapped by monolingualism, people limited to English.

In elementary schools with PEP students, there are two whole language approaches which do not pull out the PEP students from their grade-level classrooms for ESL instruction. The first approach integrates L2 with L1 students and supplies ESL assistance in the class. McCloskey's (1988) multicultural curriculum for grades K–6, *English Everywhere* designed for the Dallas school system, exemplifies this approach. Enright and McCloskey's *Integrating English* (1988) is probably the best-known current text for teachers who want to integrate PEP students into multicultural classes and at the same time integrate content-area subjects into thematic units. An example of a school which puts this into practice is Fair Oaks in Redwood City, California. The teachers who work there have documented the changes of this bilingual school in *Becoming a Whole Language School* (Bird, 1987).

The second major approach offers academic instruction in L1, with ESL taught more implicitly than explicitly. This approach is suitable for bilingual programs in which all nonnative speakers of English share one home language.

Both approaches can be seen at Machan School in Phoenix, Arizona. The school has about 800 students in grades K–6, most of whom qualify as "at-risk" for both state and federal assistance: Ninety percent receive free lunch (an indicator of low income); school scores on the state-required Iowa Test of Basic Skills were lowest in the district in 1989 and 1990; over half of the students speak Spanish as a home language. For the last 3 years, the school has been receiving special state funds for a K–3 bilingual project. As the external evaluator of that project for the past 2 years, I visited Machan School frequently, sitting in on classes, observing and interacting with students, teachers, staff, and community members. I believe it is an excellent example of whole language in an elementary ESOL context.

Machan's principal, Lyn Davey, and the K–3 project director, Kelly Draper, share a whole language view of education, a view which includes staff and community participation in the management of the school. When Dr. Davey became principal 3 years ago, she indicated to the staff that she held a strongly holistic and collaborative view of teaching, learning, and administering, and she invited teachers to join her in implementing this holistic philosophy. As the school begins its 4th year in September 1991, the staff is cohesive, with a strong sense of community and of professionalism. If we could peek into various classrooms, we would see great diversity in teaching styles, but an almost unanimous philosophy of teaching, one that is meaning-centered and student-centered.

A Machan kindergarten class exemplifies the first approach—integration of L1 and L2 students in a multicultural class. Actually, it is two kindergartens; one team of two teachers and an aide collaborate to create one large class in two rooms with two languages in use at all times. The teachers use thematic units, which allow for the integration of different content-area subjects within one theme. The human body was the theme last fall. Early in October, I watched Spanish- and English-speaking students work in pairs to outline each other's body silhouette on black paper. The children cut out their own silhouettes and, throughout the next several days, marked with white chalk the different bones of the human body, looking at a life-size skeleton and feeling their own arms and hands to sense where the bones really were in the flesh. These chalk skeletons on black paper served as wall decorations for the school's celebration of both Halloween, a traditional Anglo-American holiday, and the Day of the Dead, a traditional Mexican holiday celebrated on November 2. This typifies the sorts of activities that these students engage in: Science and art blend together as students study a topic very important to them—in this case their own bodies—with an amazing maturity for 6-year-olds. Throughout an hour, many students move easily from language to language, and the teachers respond in the language selected by the student.

The two teachers believe that it is important to validate and value not only Spanish and English but other languages, so although most of their conversation and reading materials are in these two major languages, the teachers bring in examples of other languages. In both of these rooms, as in almost all the classes at Machan School, students write daily in their journals, on whatever topics they choose, in whichever language is most comfortable (Peyton & Reed, 1990), and their teachers write back. Students read for pleasure daily, selecting from a wide variety of materials, from magazines through children's literature. One of the children who began the class as a monolingual English speaker now offers to translate English expressions into Spanish; Albert is very proud of his new linguistic ability. Fred wrote a story in English about his grandparents, who live in Mexico; he then rewrote the story in Spanish so that his beloved grandparents could read what he had written about them. One of last year's students, now a first grader, has moved from using only Spanish to reading and writing in English, and doing it so well that her classmates say she is the best reader in the room.

The second approach uses the students' home language for instruction. One Machan kindergarten exemplifying the second approach is just beginning to use whole language ideas. All of the instruction in this room is in Spanish. The teacher grew up attending Mexican schools and taught in Mexico until recently, so she knows all the songs, finger games, riddles, stories, and so on, that are appropriate for children of this age from Mexican culture. She began to teach in the U.S. only last year, and only then did she have the opportunity to try any whole language ideas. I remember visiting her room in October: She was helping 20 Spanish-speaking youngsters learn a new song in Spanish. After a few visits, I suggested that perhaps the students could start dictating their stories to her, and could start writing to her in journals, rather than spending over half of their time on drilling of individual letters and letter-sound relationships. The teacher was quite skeptical. "How can they write anything?" she asked me. "They don't know their letters yet." But she tried both the language experience dictation and the dialogue journals, and within the month she was inviting me to return to her class to see the books her children were making. Sure enough, over half of these PEP kids had written stories in Spanish about their families or pets or friends, and were proud to pose for my camera with their very own books. The success of letting the kids write what they wanted to, using whatever invented spelling they created, in whatever handwriting they had at this stage, convinced this teacher of both the efficiency and the joy of this new approach.

In many of Machan's kindergarten and first grades, the students are writing before they are reading. The kids are figuring out how text works by writing their own texts and by hearing literature read to them two to four times a day. The teachers accept the students' texts, and comment on the meaning rather than on the form. One tiny girl who had recently arrived from Mexico filled each page of her journal with a picture of a house underneath which was her emergent writing—lines and circles: ///O/O/O/OOO////. She knew that writing and drawing were different, and she could read what she had written to the teacher: "Mi mamá es en la casa." Later she began to use letters of the alphabet, beginning with M, the first letter of her name.

In this classroom, as in many, theory follows practice. As teachers try some of the techniques or materials recommended by whole language advocates, they want to know why these were so successful, and so go on to learn more of the theoretical foundations.

Secondary Education

The whole language movement has had its least effect in secondary education. Of the 2,000 people attending the first Whole Language Umbrella conference, fewer than 500 represented middle and high school teachers; similarly, fewer than a quarter of those attending the second Umbrella conference came from secondary education. Secondary schools differ from elementary schools in many respects: the most obvious is the number of students each teacher meets daily—easily 150 for secondary teachers, up to 30 for elementary. In part because of the number of students, many secondary teachers focus on teaching subjects, not students.

Secondary teachers typically face rigid curriculum demands: A 10th-grade English class in Virginia, for example, is required to study early American literature, including the novels of J. F. Cooper and the sermons of Cotton Mather and Jonathan Edwards. It demands every last ounce of a teacher's power to drag 30 bored 16-year-olds through 45 minutes of reading and "discussing" "Sinners in the Hands of an Angry God"; in such contexts, there's little energy left among teacher or students to contemplate an alternative text or topic.

Other pressures on secondary teachers to conform quietly are the tests their students must pass to graduate or, in some cases, to participate in extracurricular activities. In elementary school, children who fail an ITBS can still play on the swings at recess, and can often still move into the next grade with their peers, especially in light of research on the harmful effects of retention. But in many high schools, the motto is now No Pass, No Play and, in some cases, Low Test Scores = No Graduation. These pressures, along with the newspaper publication of average SAT scores and articles demanding more from teachers, all pressure secondary teachers into teaching to the test and following state- and district-determined guidelines very closely.

There are pockets of whole language in middle and high schools, especially among teachers of English or foreign languages. Secondary teachers are increasingly finding students from whole language elementary schools in their classes, and these students push for meaningful, relevant activities and materials, creating pressure on their teachers to question the assumption that all of their students should read the same thing at the same time and receive the same message from it. Some of these teachers manage to develop curricula with their students, curricula more relevant than the one developed by the state or district. Some secondary teachers are leaders in the whole language movement: Gilles and her colleagues, for example, wrote *Whole Language Strategies for Secondary Students* (1988) while they were all teaching middle and high school by day and taking classes with Dorothy Watson at the University of Missouri by night.

Wigginton's Foxfire projects (1986), in which L1 high school students interview local elders and write up the elders' special knowledge, have captured the attention and imagination of many English teachers across the United States, but only a few have actually tried using oral history of the local community with their ESOL high school English/language arts students. One middle school in Tucson (Carrillo School) has used oral history: The bilingual students have interviewed the *viejos* in their school's neighborhood, getting the old ones to tell stories of how the neighborhood used to be, and published these stories illustrated by old photographs and by student art. *Our Hispanic Leaders* and *Celebrations in Our Neighborhood* are titles of two of the books the students produced. In Fresno, CA, Waylon Jackson at Yosemite Middle School (D. Freeman, personal communication, 1991) publishes his students' writing and photos, and has the books hard bound; at $7 a book, the volumes are considered bargains by the students' families and friends. Currently, Jackson's students are researching family medical practices and home remedies. This project will culminate in the 1992 class volume.

Sheltered English programs for ESOL students sometimes use holistic techniques. At Fresno High School, David Freeman (personal communication, 1991) consults in setting up courses with teachers from biology and social studies in collaboration with ESL teachers at the local high schools; he says the content-area teachers quickly recognize the fun of working with ESOL students, and they recognize that an experiential approach to concept development will work with all of their students. Freeman says there is a push towards student collaboration on "real" projects and a new tendency to ask discussion questions rather than display questions. Here, too, practice runs ahead of theory.

Adult Education

The term *whole language* is seldom used for adults learning English language and literacy. *Participatory* is the term used by some educators of adults who want their classroom to be a community of learners, and who believe that student choice, student input into curriculum, and self-evaluation are vital. Participatory teachers often cite the teachings of Paulo Freire, from whom they have learned that literacy is much more than decoding someone else's message. Literacy can be empowering and liberating because it opens up to adult students ways to understand and to alter their worlds (Freire, 1970; Freire & Macedo, 1987).

The Bilingual Community Literacy Training Project in Boston is a program in which Haitian Creole speakers become literate in their own dialect and then become the teachers for others of their community (Auerbach, 1990). English literacy thus builds on first language literacy. Two New York City union programs—one at the International Ladies' Garment Workers Union and one at the Amalgamated Clothing and Textile Workers union (Spener, 1991)—use literacy in Spanish and in English to serve the needs of the workers, modeling both the importance of functional aspects of literacy and community involvement.

Gary Pharness' (personal communication, 1991) workplace literacy programs in the Vancouver, B.C., area are based on a writing model of literacy development. Both L1 and L2 speakers of English write personal narratives of their lives. Pharness uses writing rather than reading as the basis for literacy because he believes it is vital for adults to write their own stories and then to discuss these with peers. Through the writing and the discussion, the authors receive both an acceptance of their own histories and a chance to learn how their story is perceived by others. This has the same advantages as dialogue between friends: Ideas can be articulated and then examined. The writers not only become more literate but they become more confident about themselves as people, not just as workers. Increased self-esteem is a major goal of Pharness' programs, and many of the workers in his programs seem to be meeting that goal. One woman student after a year of writing in the literacy class decided to quit her job: "I'm tired of correcting my boss's spelling," she said. Her new job pays better, and the only spelling she corrects is her own.

Mark McCue directs Invergarry Learning Centre's literacy program (Rigg, 1990). Like Pharness, a former colleague of his, McCue uses the writing of personal narrative as the basis for literacy. His students include both L1 and L2 speakers of English. As students enter the literacy class, they receive a black notebook and are instructed to write something, anything, preferably about themselves. Those who cannot do this can dictate something to McCue or an aide, and this language experience text substitutes for the student's own writing and becomes the first reading material. Many of his students publish their writing in the school magazine, *Voices: New Writers for New Readers*,[2] or in *School Daze*, the school newspaper, which is entirely student-run.

The Academy, a union program in the Midwest (Soifer, Young, & Irwin, 1989), publishes student writing, as does the Adult Literacy Resource Institute in Boston. *New Writers' Voices* (not to be confused with *Voices: New Writers for New Readers* from which it derives in conception, name, and layout) are small paperback volumes from Literacy Volunteers of New York City, each telling an adult student's memories. East End Literacy Press[3] in Toronto also publishes student autobiographies, focusing especially on women's stories.

These are but a few of many examples that could be cited of programs using student writing as the basis for student literacy. A. B. Facey (1981) taught himself to write so he could tell his story to his grandchildren; in the course of writing his autobiography he learned to read, but it was the drive to tell his own story, not to read someone else's that propelled his literacy. So too, with many new literates in both L1 and L2. Programs which start with student writing are making statements about whose messages need to be told and need to be read.

By late 1991, Aguirre International is scheduled to have completed its study of model adult education programs in the United States, and may then have a lengthy list of whole language programs for ESOL adults.

RESEARCH

Holistic and naturalistic research into language and learning are part of the whole language movement; the research has been increasingly ethnographic over the last 10 years. The major characteristics of whole language research are:

1. A concern with the people being studied as people, rather than as unnamed subjects as in experimental research. Sometimes in whole language research, the people being studied are co-researchers. Instead of trying to discover how often X occurs in Y situations, whole language researchers want to know what people think and how they go about developing their knowledge.
2. A recognition of contexts as vital factors affecting results; these contexts include physical, social, economic, and political.
3. A willingness to accept the messiness that comes with opening the study to real people living real lives, seeking insights through personal histories and through reflections on those histories.

Illustrative examples are provided by the research of Read (1975); Ferreiro and Teberosky (1982); and Harste, Woodward, and Burke (1984). All interacted with and observed preschool children, trying to discover how these youngsters were thinking about literacy. The research of Read (1975) into youngsters' grasp of alphabetic principles and the research in Spanish of Ferreiro and Teberosky (1982) on youngsters' concepts of print both inform the whole language perspective on how literacy proficiency develops in

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[2] Available from the Lower Mainland Society for Literacy Education, 9260 140th Street, Surrey, B.C. V3V 5Z4, Canada.

[3] East End Literacy Press publications are available from Pippin Publishing, 150 Telson Road, Markham, Ontario L3R 1E5, Canada.

L1. The pioneering work of Harste, Woodward, and Burke (1984) with youngsters aged 3 to 6 demonstrated that emergent literacy—the barest beginnings of reading and writing by very young children—differed from the most sophisticated reading and writing of adults only in level of sophistication. The basic process of writing that children go through with their first scribbles is the same process an adult uses; proficiency does not alter the process. Similarly, a child's first reading, perhaps of a McDonald's sign or a brand name on a cereal box, is the same basic process used by sophisticated readers like subscribers to the *TESOL Quarterly*. Again, proficiency does not alter the process; it merely allows one to use the process more efficiently. The basic research procedure of all these was observational, not experimental.

Taylor and Dorsey-Gaines (1988) questioned the assumption that people of color living in extreme poverty were necessarily illiterate. They spent over a year with families living in condemned buildings in New York City and concluded that even under abysmal living conditions, parents and children read and wrote together. Their study typifies recent holistic research in its ethnographic approach and in its myth-debunking conclusion.

Whole language research with L2 populations has a history similar to holistic research with L1 populations: it has moved from an interest in literacy development to a concern with much larger contexts; the research procedures of interviewing and observing continue, but are carried out in more long-term projects. Ethnographic research has strongly affected whole language research, both in its methods and in its broad focus.

The relatively early study by Goodman and Goodman (1978) asked how school children read in English as a second language (the research was carried out in 1972-1975 and reported in Rigg, 1977). A major question of that research was, "Does it make a difference what the student's L1 is?" Speakers of Arabic, Navajo, Samoan, and Spanish read two complete stories aloud, and their reading was subjected to miscue analysis. The conclusion was clear: It doesn't matter which first language an ESL student speaks; the student's ability to read (i.e., understand) material written in English is not determined by that student's home language. The student's background knowledge, on the other hand, does make a difference; if a story is culturally relevant, if it matches what the student knows about the world and about language, it is easier to read.

In 1984, the *TESOL Quarterly* published Hudelson's "Kan Yu Ret an Rayt en Ingles," a landmark study of a few youngsters developing literacy in English as an additional language. That study used repeated observations and interviews over time and showed

examples of children's work. Currently Hudelson and Irene Serna, a colleague at Arizona State University, are collaborating on a 3-year study of the L1 literacy development of Spanish-speaking students at Machan School. Both spend at least one day a week at the school, sitting in bilingual classes, observing and interacting with the children whose literacy they have been studying for 2 years now. They tape-record oral reading sessions and conversations with the children and photocopy the children's written work. The case-study approach gives researchers a chance to learn a great deal about a few people, and the insights gained from that knowledge can inform future research, curriculum design, and instruction.

In 1986 TESOL published *Integrating Perspectives* (Rigg & Enright) which explicitly cited teachers as classroom researchers and which demonstrated one way in which researchers could integrate their perspectives. Chapters by Hudelson, Rigg, and Urzúa each focused on one aspect of a small group of Southeast Asian children in a U.S. school: Hudelson analyzed the children's writing; Rigg analyzed their reading; and Urzúa reported on the contexts of school and home in which these children studied and lived. This integration of research was possible because the three shared a whole language view of language development.

In 1987 Edelsky reported 3 years of involvement and observation of a bilingual (Spanish-English) program at an elementary school. The volume is almost alone among research studies in recognizing and discussing the political context affecting educational efforts.

Whole language research with ESOL adults owes a debt to David Nunan (1988), who has carried out studies with thousands of students and hundreds of teachers in the Australian Adult Migrant Education Programme. Nunan uses questionnaires to discover teacher and student experiences and opinions; his insistence that teachers are the real creators of curriculum is based on responses from these surveys.

Nunan's colleague Geoff Brindley (1986) has access to the same population of adult ESOL students and their teachers and has researched various means of assessment, many of which rely on the students themselves to evaluate their progress in language and even to evaluate the sorts of teaching they prefer. This manifests genuine respect for the student.

That respect is carried further in Auerbach's (1991) description of a participatory curriculum, in which teachers become cocreators of curriculum with their students. The topic of this reflective research is student/teacher involvement in curriculum; the methods of research are conversation, observation, and reflection. Throughout, there is respect for the people involved, consideration of the backgrounds each brings and the contexts each currently operates in, and an acceptance of the uncertainty that comes with dealing with real people and real concerns.

WHOLE LANGUAGE IN THE FUTURE?

Pendulums swing. Two forces threaten whole language teaching as it has been described here:

1. As *whole language* becomes a bandwagon term, it is used to mean a great many things, including the very ideas whole language developed in opposition to. Unfortunately, it can no longer always be assumed to refer to a philosophy of education that prizes holistic, natural ideas and respects the individual.
2. The current political situation in the U.S. bodes ill for all educational programs, but particularly for those that can be labeled liberal.

Despite strong pressures on the whole language movement to transform into yet another ineffective attempt at reform, I predict that the teachers who have learned to respect themselves and their colleagues as professionals, and their students as collaborators in building and disseminating knowledge will continue to work in the schools and will continue to demonstrate to their students, their colleagues, their administration, and their community that the best of the whole language perspective makes for the best education. ■

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"You Stopped Too Soon": Second Language Children Composing and Revising

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This article reports a 6-month observational study of 4 Southeast Asian children as they wrote and revised various pieces in English, their second language. Transcripts of peer response sessions, weekly compositions, and twice-weekly dialogue journals show a surprising amount of cognitive, social, and linguistic skill. Through the process of writing and revising with trusted peers, the children appear to have developed three areas of writing skill: (a) a sense of audience, (b) a sense of voice, and (c) a sense of power in language. The means by which development in these areas took place appear to be the same ones which native English-speaking children find effective, including regular and frequent writing, expectation of revision, peer response, and confidence in oneself as a writer.

In the past decade, there has been much interest in the teaching and learning of the composing process. Scholars such as Flower (1979) have transformed our view of the relationship between language and cognition, while others (Emig, 1971; Perl, 1979; Smith, 1982; Taylor, 1981) have encouraged us to re-view revision, seeing it as a "creative discovery procedure" (Taylor, 1981, p. 6). Writing has been recast as not something which only a few "creative" souls can do but is seen as a door which is unlocked, freeing us to "develop what we potentially know" (Smith, 1982, p. 33).

Important work has been done in the past decade in the composing process of children, as well as adults. The best known studies of native English-speaking children learning to write have been done by Graves (1983) and Calkins (1983, 1986). Using hundreds of hours of observations, they have suggested that children are far more capable than has been previously thought. They note that children often come to school with sophisticated knowledge of the print around them and can write notes, stories, lists, and songs in invented spellings which indicate their particular understanding of the phonetic realizations they hear. If not told they cannot write (a view we often foist on them in the first grade), children are actually able to write long stories, revise in several different drafts, get feedback from other readers in the room, and publish their pieces in books which are taken to the library. It was common with the many children Graves observed to publish 300-400 books per year in the first grade.

Although work in English as a first language has been enthusiastic and many teachers are now writing articles about their own classroom experiences, research on younger learners composing in a second language is just beginning. What studies have been done suggest that even without any literacy instruction in the L1, children will create hypotheses about the way in which their L2 (in these cases, English) functions. Edelsky (1982) found that children in Spanish bilingual programs wrote personal narratives in English which contained many of the same kinds of invented spellings as those used by native English-speaking children, or they made sophisticated guesses about what the English spelling might be, based on their growing understanding of Spanish correspondences. Hudelson (1984) writes that beginning evidence suggests children are aware of print in English and can write in their second language long before they are orally fluent in that language and that children can actually use their written work to help themselves learn to read.

Although research in this area is at an early stage, educators know from experience that literacy may be an even more important hurdle for children to master in school than their initial oral proficiency. Most L2 children, in North American contexts at least, are given language support in ESL classrooms, which focus on the acquisition of oral English and on a knowledge of the rules of grammar. Often after 2 or so years, however, school districts remove children from the ESL programs, on the basis of oral proficiency examinations, and the children spend their whole day with the mainstream teacher. However, few mainstream teachers have any training in language teaching (O'Malley & Waggoner, 1984). Because the children appear to understand what the teacher says but are not fully functioning members of the classroom, due to only rudimentary reading and writing ability, teachers frequently refer them to special education.

Cummins's (1981) work, corroborated by Wong Fillmore (1982), however, suggests that it actually takes between 5 and 7 years for most learners to become effective users of a language in all of its aspects. Since those aspects increasingly demand skill in the area of literacy, there are tremendous pressures on the learners to be effective readers and writers. Learners quickly realize how much content information they do not learn because of their rudimentary knowledge of subjects for which they are still building schemata, and schools are economically hard pressed to provide inservice for teachers and programs for children which might make the process more effective.

Thus, to help children succeed in schools, we must help all educators realize the time that learners will require to become competing members in their classrooms. In addition, it is necessary for us to know much more about the acquisition of literacy. Being more knowledgeable about this process will help educators make informed decisions about intervention strategies which will facilitate that acquisition.

THE STUDY

Recently, a school district in a suburban community in the northwestern part of the United States made a decision to learn about children who had been passed out of the ESL program but who were clearly "transitional": Their oral language was strong, but they were reading below grade level on standardized tests. Although 15 children were identified, it was decided to collect systematic data on a small number of children. Thus, I began to study more carefully 4 children, 2 of whom were regarded as having trouble in the mainstream classroom and 2 of whom were not considered at risk. Two sixth grade boys, 1 Cambodian and 1 Laotian, and 2 fourth grade girls, both Cambodian, were chosen, all of whom had been in the United States at least 2 years. None of the children had had any literacy instruction in their native language, nor had they had formal schooling, except for informal language lessons in refugee camps in Thailand. Three of these children attended one school and were thus gathered as one group; the fourth child, one of the girls, met with two other children at another school. My colleague and co-researcher, Sue Braithwaite, was an ESL supervisor who taught the children at both schools.

Our goals were twofold: First of all, we wanted to try aspects of process writing instruction which had been demonstrated by Graves (1983) to be efficacious with children and by Flower (1981) to be effective with adults. Second, we wanted to study the ways in which the children used the processes to write more effectively. We were particularly interested in what the children might do to help each other and what effect having an audience for their written work might have on their own reading and writing.

The groups met once a week for 15 weeks; each 45-minute session was audiotaped and transcribed. It was clear we were not going to perform miracles in those few minutes, but schools were reluctant to take the children from their mainstream classes for any more time. We began with the assumption that many of the successes in children's literacy instruction in the first language could be replicated in a second language; we had faith in the processes we set up for the children to become more proficient in literacy and especially in writing.

When they met together, the children generally brought a writing piece that they had begun at home. Sometimes we began writing in our meeting time, and we wrote along with them. We spent time, both before and during the writing, talking about what the writer wanted to include in the piece. And when all of us met together, our primary goal was to communicate meaning. Thus, we set a tone throughout that revising was necessary and expected. We tried to convey the message that each human being has had experiences that no one else has had and that sharing is valuable to both writer and reader.

The revision process was to be helped through peer response groups. Each person would read a piece to the others in the group, and the group would give feedback to the writer. The kind of feedback varied with different goals and different pieces, but we were following Graves's (1983) suggestion that "revisions that children make as a result of the conference can be at a much higher level than those made when the child is working and reading alone" (p. 153). Revisions, then, were stimulated by the feedback, for "comments create the motive for doing something different in the next draft; thoughtful comments create the motive for revision" (Sommers, 1982, p. 149). Writers would take their drafts home and return the next week with additional drafts; the process would continue until they were tired of the project and it was no longer a "hot topic" (Graves, 1983).

The other kind of writing the children did was dialogue journal writing. In dialogue journals, interactants are free to "discuss" anything that is of interest to them, and topics can be continued or changed at will. Early work by Staton (1982) and her teacher colleague, who studied the ways in which 26 sixth grade students wrote back and forth to their teacher, showed what an efficacious means this was to acquire writing ability. So that the children we were teaching had the potential of writing in their journals twice a week, my co-researcher had them send their journals through the school mail to her office; she would send them back, and then they could write again before they met for their weekly session. (Many other data were collected in the course of the year; for an explanation of other aspects, see Urzúa, 1986.)

The data presented in this article focus on the journals and the peer response sessions in order to demonstrate the ways in which the children developed their writing. My belief is that given the goal of effective written communication, the children's writing developed as a result of their growing sense of a divergent audience and their conscious awareness of the means by which they could manipulate language as they developed their own voice. The importance of having a reader, as well as a responder, was evident in the children's products, as well as in the group process itself. Therefore, this article explores three areas of growth—a sense of audience, a sense of voice, and a sense of power in language—and how the audience affected each.

AREAS OF GROWTH

Sense of Audience

Recognizing that someone other than yourself must read and understand your message is not an easy task. For example, the audience for a writer is generally not present but is removed in time and space. Also, there is no predictable sharing of exact experiences, although there is some expectation that the reader will be able to understand the general issues raised. Always a difficult task, it is particularly difficult for children who are moving away from egocentrism, Piaget's terminology for a "cognitive state whereby learners center on a very narrow band of thinking and ignore other problems in the surrounding field" (Graves, 1983, p. 239). As learners get feedback in various ways from the environment, they begin to understand how messages must be varied, how to explain things to certain people, and even how to cling to what is important. Graves (1983) and Elbow (1973) have speculated that the group response technique helps writers to improve because they become aware of their own writing as they reflect on someone else's. In addition to these demands, second language children are trying to understand what someone from another culture needs to know.

What, then, appears to be the effect of audience response for these 4 children? Because of the immediacy of audience feedback, peer response groups appear to have had a dramatic influence on writing development. One of the first indications that the children were more cognizant of audience than we had thought came one day when the groups were working on nonfiction writing about army ants. When my co-researcher asked Vuong, a sixth grade boy, what was a really important fact that he could tell somebody, he answered, "Who?" She replied, "Anybody. Mrs. Sagar. What would you tell her?" I am often struck, as I read through these transcripts, with how little attention we paid to the audience the children should be writing for. Yet here is Vuong reminding us that we needed to give him authentic writing purposes which real people would read.

These real people turned out to be principally their friends. The children developed a sense of audience by being with people they trusted who asked them questions and suggested things about their writing. The questions and sometimes the suggestions were taken seriously by the writers, who frequently made notes for themselves so they would not forget what their friends had said. Although direct imperatives from reader to writer (e.g., "tell us where you were going") sometimes affected subsequent drafts, it was largely questions from the peer response group which substantially influenced the revision process. To demonstrate this, let us consider the last piece Vuong wrote in the ESL class.

The task for this piece was to write about a self-chosen topic. Both of the boys chose to write personal narratives about their experiences at Outdoor School, a sixth grade camping experience focusing on science and ecology experiments, interpersonal relations, and traditional camping activities. After writing for a few minutes in class and sharing orally some of the content they might want to include in their paper, they finished writing their papers at home. During our peer response session, I introduced a new format, taken from Elbow (1973) and A.R. Gere (personal communication, April 20, 1984). This process consists of listeners taking notes after the piece has been read and the writer reading the piece a second time, while the audience takes any additional notes. Writers are encouraged to take notes to remind themselves of the questions posed by the audience.

The first part of Vuong's first draft is presented in Appendix A. After hearing Vuong read his paper twice, we all took notes about anything we wanted to remember to tell him. Then we each took turns reading from our notes. As can be seen in Appendix B, much of the input from the other children was in the form of questions about things on which they wanted more information. Vuong's oral responses are given in the second column, and the notes he took during or after we spoke to him appear in the third column.

The impact of this audience input on the second draft, written at home, can be seen in Appendix A. Vuong added more information and clarified and expanded on information he already had, all at the appropriate place and all without any indication from teachers or friends as to where these revisions should take place. The first question, for example, "How was it on the boat when you crossed the river?" stimulated Vuong to respond orally, "It was scared. You know, foggy, deep water. The water is green." Jotting down into his notes only the words "Information cross the river," Vuong nevertheless made a significant revision in his second draft, one which added information similar to what he had answered orally over a week before. And he added the information at the appropriate place in his composition. Other significant revisions resulted from two comments I made (Numbers 5 and 6), neither of which, interestingly, were given any oral response during our discussion time.

Some comments and questions Vuong chose to ignore or change (Numbers 7, 8, and 9), while one note he made for himself (Number 10) does not seem to have a referent in the discussion. Perhaps some of the questions helped the writer tell the story he wanted to tell, and others did not. But it certainly is obvious from changes he did incorporate into his second draft that Vuong was eager to show his audience that he respected their opinions and that he was trying to communicate an important event.

It surely can be argued that his second draft is a long way from being an interesting, cohesive account of his experience. But it is, after all, only the second draft, and unfortunately the close of the school year did not allow time to revise. But in all our experiences with the children, this one revision may be the most exciting because it represented an enormous breakthrough for Vuong. He had made few, if any, changes on subsequent drafts of any of his previous pieces; his idea of revision was to copy the piece onto a clean sheet of paper, being careful to avoid cross-throughs or sloppy penmanship. Even after his peers gave him many suggestions, he often returned with exactly the same version. On one such revision, for example, the words were even placed on the page in a similar fashion. His revision of the Outdoor experience, therefore, represented his first real understanding of the purpose for writing: to communicate something important to an audience.

Vuong, himself, told us later how significant this experience was. Although Cham, one of the girls, had left to return to her class, Vuong told us he had to read his paper. His reading was animated and his miscues meaning based. When he was finished, Khamla, the other boy, told us, "It's better than the last time. He changes lots of sentences." This remark led to the following exchange:

Vuong:	I add some more in, you know about water and stuff.
Khamla:	The water was green?
Vuong:	You know I say how I feel. More campfire, something like that.
Braithwaite:	How do you feel about the new paper?
Vuong:	New one? I feel better. A lot better.
Braithwaite:	Did it help you to have the suggestions?
Vuong:	Yeah!

Graves (1983) tells us this breakthrough is not unusual: "Conferences have a cumulative effect on the writer. After four or five conferences . . . writers usually display more initiative because they have found their subjects, can speak about them, and assume responsibility for their success" (p. 142).

Vuong, of course, was not the only one to make revisions based on the peer response sessions. The feedback on one piece to Cham, one of the fourth grade girls, was so motivating, she actually revised three different times (see Appendix C). Her original draft of a trip into the future and her second draft were practically identical. Revision from the second to the third draft, however, was more extensive. Cham used more precise description ("kicked something *hard*" and "*shinny* red button") and provided more cohesion, such as her use of *suddenly* to indicate a relationship between her pressing a button and the release of the green pills. Her sense of causes of events was more sophisticated in the third draft than in the second (see, for example, the last four sentences), and she exhibited more complex linguistic forms, such as in the clause, "everything was odder . . . *when* the chair stopped," which was changed from"Everything was odder than the flying succer."

An examination of the responses the reader group gave to Cham reveal the impact of feedback on the sense of audience. For example, when I commented that dinosaurs and skeletons are found even today and that I was confused about the exact time she was referring to, she subsequently dropped all references to skeletons and added, "As soon as it stopped I was amazed to see that I was back in 1984." At another time, Cham, who was generally quiet during feedback on her paper, was apparently influenced by a discussion on what the group considered "weak" words and suddenly chimed in, "I could put *messy* and *spooky*," because Khamla had suggested *ugly* was a weak word for him. In another part of the discussion, I questioned how the green pills might have been eaten. Khamla, perhaps understanding that the absence of gravity would make it difficult to eat the pills, wondered if the pills came right out and into her mouth. My co-researcher questioned how Cham assumed it was all right to eat the pills. Cham, in a rare oral response, replied that she was hungry. She subsequently revised her draft substantially: "I was getting hungry and I decided to prest another button. *Suddenly, a bunch* of green pills *drop from the cieling. I nelt down on my knees and grab some and put it in my mouth*."

Although by our standards, the third draft was an improvement over the previous one and the boys liked it a great deal, Cham was still interested in developing her ideas. Toward the end of the response group on the third draft, my co-researcher asked Cham if she liked the story. Cham replied no and suggested that she would really like a friend to go along on her trip. Having observed Cham in the language arts mainstream class, I was also aware of a recent emphasis on the use of quotes. I therefore suggested to her that she might incorporate dialogue into her piece if she did in fact add a second person. Her fourth draft is eloquent testimony to the influence of those two ideas and to the writer's drive to create a story that said what she wanted it to and also pleased her audience.

Besides the sense of audience that the children were developing through their compositions, growth was also evident in their dialogue journals, perhaps because they had an authentic respondent. Dialogue journals, because of their interactive nature, also provide a sense of audience, although a somewhat different one. Whereas in compositions, feedback influences revisions, in dialogue journals feedback may possibly influence only subsequent entries. The ultimate result, however, may be the same for the writer: increased awareness of who is reading the piece.

With these 4 children, accommodation to the audience through dialogue journals appeared to develop through (a) acknowledgment that someone else was interested in what they knew, (b) acknowledgment that they were interested in what someone else knew, and (c) acknowledgment that they were interacting through the written word with a specific person.

The children had varying strategies for acknowledging that someone else was interested in what they knew. As with compositions, it took Vuong the longest to indicate he was aware of the conversational tone of the journals. For many weeks he apparently saw the journal as an assignment to be finished, rather than as an opportunity to explore mutual issues (see Appendix D). In fact, Vuong had been concerned about what he might write in his journal, and my co-researcher had suggested he could write about anything, maybe something that went on during the weekend. Subsequent entries, therefore, simply listed his weekend activities, apparently oblivious to the queries made through questions. In each response, my co-researcher tried to extend a topic initiated by Vuong, on the assumption that if he was interested in the topic once, he might be willing to discuss it further. Nothing seemed to prod Vuong into recognizing his responsibility in the written conversation. Finally, my co-researcher left the topics which Vuong initiated and suggested a topic in which she knew Vuong was interested, his violin playing. In a breakthrough entry, Vuong finally answered her question, demonstrating his acceptance of the interactive nature of the journal.

Sonkla and Cham had other ways of acknowledging the presence of an audience. At times, they would answer the questions posed on the same line as the question. Sometimes they would answer a series of questions, add a little information, and form a paragraph.

Subsequent to Vuong's acknowledgment that my co-researcher was interested in what he had to say, Vuong also began to develop another aspect of a sense of audience, that of being interested in what the other person knows. A week after he answered the question about the violin piece, Vuong initiated the topic of going fishing, which was extended over three entries. On the third entry he said, "On Saturday we went to fishing at astoria it was fun we didn't catch anything. I catched one fish it to small than I let it go. How is your weekend what did you do." Although there was no question mark, this showed obvious interest in his partner. My co-researcher responded with a long entry on how her daughter and she had played soccer games and invited his thinking on a bunch of women playing soccer. Vuong ignored the question and the topic, returning to his weekend routine, but then ended the entry with "How about your week." He "asks" about his partner's weekend in one other entry, but no other questions occur. Perhaps in Vuong's case, form was preceding function.

Although most of the children eventually developed the ability to answer and ask questions, it was not always clear that they were writing something for a specific audience, that is, their teacher. The person who seemed to come closest was Sonkla. Nearly all of her entries began with "Dear Mrs. Braithwaite," and sometimes even in the body of the entry, the name would be added. In one entry, for example, my co-researcher had asked if she might see something that Sonkla had made, to which she replied, "I can't show it to you because it was gone. I'm sorry, Mrs. Braithwaite." Asking for forgiveness occurred several times, reflecting, perhaps, a certain personality trait and/or a comfort with self-expressive language.

After my co-researcher had delivered invitations to a party at her house, Sonkla said, "I'm afraid that I can't go to your party. . . . Thanks for invited me." Braithwaite responded that several of the kids wanted to see her and that she hoped Sonkla would reconsider. Apparently Sonkla did reconsider, for the next entry said, "I asked my mother about the party. She said 'It would be nice to meet your old friends.' I think my mother is right. So I'll go to your party." She even went on to suggest the kind of movies that could be shown during the party.

A particularly poignant entry revealed the extent to which Sonkla understood not just that she was interacting with her teacher but that she was writing to a trusted friend (see Appendix E). To such a personal entry, my co-researcher responded with a salutation, a form she rarely used.

Sense of Voice

A second area of development was in the children's growing sense of that driving force in the writing process called voice. According to Graves (1983),

> voice is the imprint of ourselves on our writing. It is that part of the self that pushes the writing ahead, the dynamo in the process. Take the voice away and the writing collapses of its own weight. There is no writing, just words following words. (p. 227)

Voice is always an elusive concept; professional writers no less than first graders struggle with the right way to say something. It may be even more difficult, however, for younger second language learners: They not only have the mechanical and conceptual difficulties of writing which all children have, but they also are struggling to know how something must be said to an audience of another culture.

Although it took a while, we finally realized that the children had to be in control if their writing was going to develop. Whereas earlier in the year, we tried to assign topics for papers, toward mid-year it became clear the children were more effective when they chose their own topics. As with the children Graves (1983) studied, when this control occurred, the children's voice "boomed through" (p. 229).

In numerous instances, we encouraged the children to write about their own topics and only appropriate into their writing those ideas which they thought advanced their own pieces. In one response session, for example, Cham complained we were doing boring things in writing. When questioned, she admitted that she did not like the topic; she thought she had to write about something that was true. We assured her she could write about anything she wanted. During another response session, my co-researcher encouraged Vuong to write down some of the ideas the group had given him for the revision of his piece. Khamla asked whether he had to accept the ideas, to which Braithwaite replied, "You don't have to use these ideas, but if you hear one that you like, write it down."

Although it was not always obvious at the time the writing groups were in action, it is possible to see in retrospect a developing sense of honesty and openness in the children's writing, suggesting perhaps that they were feeling more confident about their audience and could let their true feelings shine through. Sonkla's poignant journal entry about the dirty folders is such an example, as is another piece by her written in class. In the latter case, she complained that the substitute teacher told her to work more on a piece Sonkla obviously felt was finished. It seemed to be a personal affront to her, and she angrily stated she wished she could have stuck her tongue out at the teacher.

Voice is often reflected in the amount of space a writer devotes to a subject, and it is interesting to observe that even when a similar task is given, individual differences do occur. It was possible, for example, to compare what the children did on an assignment to write about going into the future by some means, describe what was there, and tell about returning to the present. All of Cham's four drafts (Appendix C) are mostly devoted to a description of the time machine and the journey she took, with relatively little attention to what the future was like and how she returned. Even when she wrote a fifth draft in the next year in school, three of the four pages of text were about the machine. Vuong, by contrast, spent most of his time describing the future "place," devoting 9 of the 15 sentences to what it was like and how he felt. These differences appear to be part of the emerging voices of each of these authors.

How much of a topic to include and whether to add other information are always cognitive issues for a writer. Through the peer response sessions, we can once again see these decisions being made. On several occasions, group members would suggest ways to handle certain problem areas. For example, in a discussion on Vuong's piece on traveling to the future, the group was confused about what time period Vuong was discussing. Khamla had several suggestions: "When he went up he can say that he saw a sign on the wall like I did"; "He could see a theatre movie. It could have a light coming up and it could be the year 2084." Interesting ideas, but apparently not consistent with Vuong's voice; he did not add any information about the year his time machine visited.

Cham had a similar problem in her piece on the future (Appendix C), and again Khamla had a suggestion: She could just say she was in 2084. Later on, my co-researcher wondered if a little clock or calendar could be present, and Khamla excitedly shouted, "When she pushed the button she could say there's a clock coming down and tell the time. . . . The clock moved the years." Cham, however, evaluated the suggestions and chose not to make a change in her next draft. However, in her fourth and final draft, she found a way of meeting the needs of her audience to know the information and did it in her own way. In the dialogue between the two friends who went into the future together, Cham's friend said to her, "Hey Cham, look at this. It says Happy 2084 and it's printed out of green pills."

What is revised and what is not may be testimony to an emerging sense of voice and decision making. When revisions are made, it certainly reflects a sense of audience, but it also reflects a decision that the suggested change, in fact, advances the individual piece and tells the story effectively.

As was seen in Vuong's Outdoor School piece (Appendix A), several suggestions were not heeded, and some revisions were made which apparently were not influenced by the peer responses. I use the term *apparently* because there are many reasons why authors choose to revise or not. Sometimes the suggested change sounds like an effective one, but the second language writer does not know how to phrase it. Sometimes an author thinks the change is not significant enough or even forgets to do it. The information suggested may be too radical a change from the original, and the author may not have a rich enough schema to build coherently onto the present paper. Or perhaps the author regards the input of trusted friends as an interest in the information for its own sake, rather than as an interest in helping to tell the story. (Researchers have learned more about this decision-making revision process through protocol analysis, in which learners speak aloud as they revise. This technique was not used in the present study because I was not certain the children possessed enough oral language proficiency or had the cognitive flexibility both to write and reflect on the writing.)

There was eloquent testimony, however, that suggested revisions did help the author tell the story in the emerging voice. Vuong's Outdoor School piece showed how the amount of attention paid to one aspect of the topic may have been influenced by the peer input.

Nowhere, however, did the voice of the author boom as loudly as in Cham's fourth draft of her piece on the future (Appendix C). Although the added dialogue could perhaps be attributed to my suggestion and might therefore more properly represent a response to the audience, it also seems apparent that when Cham broke into this new format, she freed her own voice. The interactants exclaimed, yelled, suggested, and laughed, not just "said." Action and dialogue were woven together; sometimes the story line was carried through the prose itself, as in "'Nat, there's a big chair over by the corner. Let's go and sit down.'" Other times the action was carried through the prose itself, as in "Then I accidently hit the biggest button." The relationship between the two interactants was believable and very typical of fourth grade girls: They were curious, they took turns, they looked to each other for solace, they were aware of a possibility of having defied authority, and they giggled. Even the events which were carried over from the third draft were reanalyzed: The house in the third draft fell down as a result of stepping on the stair, but in perhaps a more logical event, the house in the fourth draft began to crack as a result of the weight. Many words were replaced with ones which were more vivid: "raced" instead of "ran," "cute little thing" instead of "small," "millions of green pills" instead of a "bunch," "creepy house" instead of "house." Cham was finding her booming voice.

The children also expressed their emerging voices through appropriating words, phrases, sentences, and format from the peer discussion or even from someone else's paper. Although it may appear that using someone else's work would be simply an act of copying, my sense of the writing process in children suggests that only when the language or idea truly fits or "sounds right" to an individual will that writer actually incorporate the changes. (Samway, 1987, in preliminary data analysis, reaches the same conclusion.)

Prewriting discussions often gave the children ideas. In our discussion before writing the nonfiction piece on Outdoor School, Vuong said he liked the food, and in his original and revised drafts he focused on many aspects of eating. Khamla, perhaps stimulated by this discussion, included four lines about food and eating everything on your plate. Sometimes comments by one member of the group would influence another member, as when Vuong, two drafts after a discussion, added the word *suddenly* to his piece subsequent to my telling Khamla I liked the way he used the word. In another interchange, Cham asked Khamla where he went to eat when he attended Outdoor School, and he answered "at a cafeteria." Khamla made no subsequent change to his piece, but Vuong wrote a note to himself and added in his subsequent draft that he went to the cafeteria.

Frequently, the appropriation was complex. In his first draft of the piece on the future, for example, Khamla included a friend on the trip with whom he talked, although he did not use quotation marks. As we have seen, Cham picked up the idea of incorporating a friend on her trip and used quotation marks effectively. In a subsequent piece written as a postevaluation for school district purposes, Khamla used extensive dialogue, much of which was accompanied by quotation marks. Sometimes as a duet and sometimes as a solo, the children's voices became increasingly clear.

Sense of Power in Language

A third area of growth in the children's writing which was influenced by their peers was in their sense of power in language. Specifically, they were recognizing, largely through revision, that language can be manipulated and rearranged, that sections of a composition can be deleted or added. They realized they were masters, not slaves. They began to develop flexibility in language use and ask about things they did not know, so they could add to their repertoire. Graves (1983) suggests there is a major breakthrough in children's writing when they see "the words as temporary, the information as manipulable. . . . Until the children see information as primary and the details as essential to good communication, they are unable to see information, words or syntax as manipulable" (p. 159). These four children, then, seemed to be developing a repertoire of possibilities which would help them feel more secure in using new language forms.

This third area of growth became more obvious to us toward the end of the year. But even early in the year, the children knew that they could add information into their pieces, a process which is shown by Graves (1983, p. 156) to be the easiest and the earliest kind of revision. We often posed problems to the children about where they could insert information, as my co-researcher did in an interchange with Cham in March. While discussing what events should be included in a piece on the future, Braithwaite asked Cham if she wanted to return to 1984 after her time in the future. When Cham said yes, my co-researcher asked, "Where would you say that? Would you put that in your story?" Cham replied, "I could add it."

One of the most obvious examples of the children's growing sense of power came through their questions to each other about words they did not understand. "What is *jau*?" "I don't know what a laser is." "What is *first food?*" (The author had said "fresh food.") Using their more proficient oral language as a tool with which to master the written word, they frequently engaged in animated discussion about aspects of language which they may not have-understood at first. A good example of this occurred in May, after Cham had read her piece on a field trip to a restored fort. During the response session, Khamla said, "Almost at the end I like when she said, 'Some kids ride on the merry-go-round and got dizzy.' I like that sentence." This remark led to the following exchange:

Vuong: [looking at Urzúa] Dizzy? What's that? Tired?
Urzúa: Dizzy? When you go around in a circle—your head gets very light.
Vuong: Oh, yeah. It gets hard to stand up.
Urzúa: That's right—you feel yourself spin around.
Vuong: And you can't see everything. Everything is moving.
Urzúa: That's right.

It is interesting that this conversation continued for so many turns when, in theory, the problem of what was meant by *dizzy* was solved after I defined it as your head getting very light. The relationship of trust and risk taking, however, encouraged Vuong to go on, each turn in our interaction giving him a confidence about his new language. Cham retained the use of *dizzy* in her piece, but more important, Vuong would probably use the word in a subsequent piece.

Although in the earlier sessions much of the influence for changing language in their pieces came from the adults, the children themselves soon began taking this responsibility. In a May session, for example, when they were discussing Vuong's reading of his paper on the future, the following exchange took place:

Cham: In the beginning of the third paragraph, it can be put together.
Vuong: Oh, you mean, "I went to school. Nobody was there"?
Cham: You stopped too soon.
Vuong: Yeah. Make that one sentence.

The idea that language can be changed to meet the desires of the author was thus suggested by a friend.

Evidence that the children began to sense they had power in language was also seen in the dialogue journals. Frequently this took the form of using difficult language which represented risk taking on their part. Risking difficult constructions and words may be a way in which children can tell us that they feel confident about their developing abilities.

The person who exhibited the most confidence in language was Khamla. Both orally and in writing, he threw himself into linguistic situations with energy and enthusiasm, though he was, of all the children we had contact with, the one who consistently used the most inventive spelling. His journal entry in Appendix F demonstrates his confidence. What meaning does Khamla attach to "to tell you the thouth [truth]"? It is difficult to say, but perhaps it is enough for us to admire his confidence in using expressions like *secret admirer* instead of safe, easy words, like *boyfriend*.

CONCLUSION

The data presented in this article are encouraging. They suggest that both cognitive and social aspects of literacy develop for ESL children in ways which are similar to those for English-speaking children developing literacy in their first language. These 4 children seemed to be learning how to take audience into account when they were writing and were developing a sense of their voice and how to manipulate language for the best effect. The means by which these developments took place were the same ones which native English-speaking children find effective as well: frequent writing to communicate real and unique "stories," with an expectation of revision to help make more sense; reading and responding by peers and adults who value the author's perspective and who want to know what the author knows; personal, interactive writing, approximating oral conversation; and building confidence and trust in oneself as a writer who is trying to find a voice.

It is hard work to tell what you know and even harder to help others tell what they know. It is hard work for children in peer response sessions; the concept of cooperating and contributing to someone else's benefit is difficult for them to accept and somewhat antithetical to the ways in which schools in the United States operate.

It is also hard for the teacher—to "let go" and trust other students of the language to give effective feedback; to become a listener and find that fine line between telling children what should be done in their pieces and giving "movies of the mind" about one's response (Elbow, 1973); and to ask the right questions, ones which will help the authors tell their own stories, rather than an interpretation of their stories.

The data reported here are only modest beginnings, even though Samway (1987), studying more children from different language backgrounds, has begun to substantiate the incredible power of the audience on children's writing. The findings of the present study ultimately raise more questions than they answer: What is the relationship of writing to overall linguistic proficiency? Do revisions, whether stimulated by self, peers, or teacher, contribute to better writing and/or better overall language use? How are revisions influenced by an audience of a different culture? an audience of mixed cultural backgrounds?

Classroom-centered questions are also raised by these data. As students learn to ask questions about information in a peer's paper that they need clarified or expanded, how do they begin to recognize those needs in their own writing? How do learners develop the ability to ask questions about others' papers which are truly helpful to the author, not just comments to keep the conversation moving? How can learners best be taught to be effective responders? How can teachers learn to confer with children?

Although the questions are complex, the resulting answers may contain some of the most important information we could have about second language children and their instruction in schools. As we spend more time observing children in peer response sessions and in revising their pieces, we will ultimately learn more about what helps them to tell their own stories. Or, as Murray (1979) puts it:

> I hear voices from my students they have never heard from themselves. I find they are authorities on subjects they think are ordinary. . . . It is a matter of faith. Faith that my students have something to say and a language in which to say it. (p. 16)

■

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APPENDIX A

Vuong's First and Second Drafts

First Draft

First we got to the river we have to cross the river. On boat and we got to the camp and we pick up our stuff after that and we have to carry our stuff up to the cabin. Then we take our clothes out of the bags and get ready for dinner. After that it was campfire.

Everyday we went hiking and we have to take notes. I went cascade hike we saw a woodpecker it was fun hike finally we on top of the mountain it was so scared. We saw some plants on the road it was tired hike finally we get to eat lunchs. I made my self four sandwiches boy it was good. It was a beautiful day we can see everywhere.

Second Draft

When we arrive to outdoor school and all of us cross the river. The water was deep it was green water it has plants in it. When we arrive to other side we have to wait for peoples to cross the river. And then we walk to cafeteria and get our bags and we to the cabin and take our clothes out of the bag and put it on my feet. And we went down to eat lunchs after lunchs we have to sing a song so we can dismiss. .

Then we went to hiking it was a long hike we were so tired finally it was lunchs time on the top of mountain. And we come back form the mountain. It was dinner time after that it was campfire each cabin have to make up a skit to show each other. When I get there I felt happy when you have to live I felt say. On the last day we had breakfast in bed we had coffee cakes eggs and oranges.

APPENDIX B

Peer Response Group Session: Transcript of Tape and Writer's Notes

Peer Response	Writer's Response	Notes
1 How was it on the boat when you crossed the river?	It was scared. You know, foggy, deep water. The water is green.	Information cross the river
2 Was it a little boat or a big boat? If it was a little boat, did it take some people and then come back and get some other people?	Oh. 10 people at a time.	10 people at a time
3 Where do you put the clothes? "What clothes?" The clothes that you wear.	Oh, under our bed. No in the bag. In your bag, you know, you can put below your foot, feet. Put below your feet when you are sleeping, you know, put on your feet.	[Nothing]
4 He didn't tell us what you do in campfire.	[Nothing]	[I tell him to put that down.] More on campfire
5 The first part seemed to be the first impression that you had of the camp. But I didn't know it was camp. So what you need to say is, "When I arrived at Camp Westwind . . ." and then go on and say what you did.	[Nothing]	When we arrive
6 [Talking about whether crossing the river was scary.] It would have made me a little more involved in your story, I think, if you had said how you felt.	[Nothing]	How I felt
7 Who was your counselor?	Shark. That's not real name. It's kind of play name, you know? His real name is David.	His name David
8 What was the woodpecker doing?	The woodpecker was eating something, maybe, you know, it tries to make a house or something.	woodpecker
9 I like the word *sandwich*.	[Nothing]	[Nothing]
10 [Reference unknown]	[Nothing]	All of us

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APPENDIX C

Cham's Four Drafts

First Draft

One day I was studing in the library. Then I kicked something under the table. I crawled under the table and saw a time machine. It was small and then I saw a red button said "Push." I pushed the button and the time machine grew bigger. It was almost as big as the table. There were two bars on each side of the time machine. I took hold of the bars and climb in. There were buttons everywhere and there was a chair. I sat in the chair and start pushing buttons. There was a sign said "Flying Succer." The Flying Succer zoomed up into the sky. I was getting hungry and I pushed another button. Green pills came and I swallow it. After awhile my chair was spining and the machine was running by itself. Finally the flying succer land. I got up and went to the door to push the button. I stepp out of the flying succer. Everything was odder than the flying succer. There were people skelaton and dinosaur's skelaton. Everything was dead. The house was torn down and no one was there. It was all messy and ugly.

Second Draft

One day I was studing in the library. Then I kicked something under the table. I crawled under the table and saw a time machine. It was small and then I saw a red button said "Push." I pushed the button and the time machine grew bigger. It was almost as big as the table. There were two bars on each side of the time machine. I took hold of the bars and climb in. There were buttons everywhere and there was a chair. I sat in the chair and start pushing buttons. There was a sign said "Flying Succer." The flying succer zoomed up into the sky. I was getting hungry and I pushed another botton. Green pills came out and I swallow it. After awhile my chair was spining and the machine was running by itself. Finally the flying succer land. I got up and went to the door to push the botton. I stepp out of the flying succer. Everything was odder than the flying succer. There were people skelaton and dinosaur's skelaton. Everything was dead. The house was torn down and no one was there. It was all messy and ugly. I want to go back to 1984 because I want to be with people and my friends. I want to live in a nice house, not a torn down house.

Third Draft

One day I was studing in the library. Then I kicked something hard under the table. I crawled under the table and saw a time machine. It was small and rough and I saw a shinny red button. I prested the button and the time machine grew bigger. It was almost as big as the table. There were two bars on each side of the time machine. I took hold of the bars and climbed in. There were lots of strange buttons and in the corner was a chair. I sat in the chair and started presting buttons. The Time Machine zoomed up into the sky. I was getting hungry and I decided to prest another button. Suddenly, a bunch of green pills drop from the cieling. I nelt down on my knees and grab some and put it in my mouth. After awhile my chair was spining and the machines ran by itself. Finally the time machine landed and the chair stopped. I got up and went to the door. I was so dizzy I tripped. I stepped out of the time machine and everything was odder and different when the chair stopped. It was all messy and spooky. The houses were all torn down except one. As soon as I stepped on the stair the house fell down and I was frightened. I ran back to the time machine, closed the door and sat in the chair. I prested the same button and the chair spun again. As soon as it stopped I was amazed to see that I was back in 1984.

Fourth Draft

One day me and one of my best friend Natalie were in the library studying. Then I kicked something under the table. "Hey, Nat, there's something strange under the table. Let's see what it is," I exclaimed. So we crawled under the table. "What a cute little thing," said Nat as she prest a shinny red button. The machine got bigger. "Back up, Nat," I yelled. "There's lots of machines and buttons inside there," said Nat. "Hey, I know what. We can call this thing a time machine," I suggested. Nat prest another button on a door and it opened. "Nat, there's a big chair over by the corner. Let's go and sit down." "Let us take turns pressing the buttons," said Nat as she prest one button. The light was on. When I prest the button, the door closed. We both decided to prest just two more buttons, and then we leave. Suddenly, the roof opened and millions of green pills dropped from the sky. We grabbed some of it and put it in our mouths. Then I accidently hit the biggest button. The chair was spinning faster each time. Natalie and I held on to each other and screamed. When it stopped, we stepped on the pills and went to the door. "Hey Cham, look at this. It says Happy 2084 and it's printed out of green pills. Come on, let's get out of here," I said. "Oh, oh. Now what kind of place are we in," said Natalie as we stepped out of the time machine. "Come on. Let's see who's in that creepy house. And as soon as we stopped on the stairs, the house started to crack. We ran back to the time machine and pushed the door closed. Then we raced back to our chairs and Natalie hit the big button and the chair started spinning again. When it stopped we both disappeared out of the time machine and were back under the table in the library. We looked around to make sure everything was back to normal. Then one of our friends walked and asked, "What are you doing down there under the table?" Natalie looked at me and laughed. "We're looking for candy."

APPENDIX D

Excerpts From Vuong's Dialogue Journal*

Weekend

It was Saturday I woke up and I took a shower. And after shower then I watched cartoon with my mom. My dad wasn't home. He went somewhere. When he come back he took us to my uncle house. We had dinners there. And came back to our house.

Does your uncle live nearby? Does he have any children for you to play with? What do you do when you visit your uncle's house besides eat dinner?

Weekend

One Saturday morning I was the only one wakeup. My mom and dad were sleep I turn the television. And my dad wokup. Him and I watched television. I get up and take a shower and brush my teeth. I was home all day. We did go anyplace.

What else did you do this week? Did anything exciting happen in school? I really liked the map you drew for your assignment. I can tell you worked hard on it.

On Saturday morning I woke up and wash my teeth. Then my mom and dad going out. I have to do laundry. After that I watched football game.

Vuong, what did you do during the two week vacation? Did you go outside during the snow and ice? Did you slide around? Were you cold?

On Saturday I wokeup and wash my face and ate breakfast. After that I watched television and then we went out to my uncle house. Then we came back home. On Sunday I have to do laundry in the morning.

[Then he included a story in his journal which had been written in his class.]

Vuong—that was a real interesting story you wrote about being kidnapped. I could really imagine you in that man's house with all the junk and the gun. Hope you will write some more stories soon!

One Saturday I woke up and wash my face. And turn on the television. I was watch a basketball is was fun. On Sunday I was watching Super Bowl 18 it takes long time to get started. Then they start the game the L.A. Raiders won the game the score the Raiders 38 and the Redskins 7.

Wow! That was a pretty one-sided game, wasn't it? Who were you rooting for? Did your favorite team win?

One Saturday morning I was watching basketball game it was a lot of sports all I watched is sports I had to do laundry before the game started I had a good weekend.

Vuong, what is the name of your favorite violin piece? How long have you been playing the violin?

My favorite piece is call Lightly Row that my favorite piece I been playing for three year.

APPENDIX E

Excerpt From Sonkla's Dialogue Journal

Dear Mrs. Braithwaite

Can I ask you a question? I feel sad because everytimes you mailed my journal back I always saw a different folders. When I took that folder home I always saw it riped. Why are you always changed the folders? Well I don't mean that I don't like that folder. Everytimes those folders on my desk, everyone start to teasing me. I always turned red, you know that I'm the shyest girl. They always said "what a beautiful," but it's mean a opposite word. Well, see you on Thursday.

Dear Sonkla,

I didn't realize that getting your journal in envelopes made you feel sad. I'm sending you a fresh envelope today and I will try to use the same one from now on.

APPENDIX F

Excerpt From Khamla's Dialogue Journal

November 3, 1983

I have met a glir. She is a nice glir. She help me on my works. She is in Mr. B— math class I like her but She does't no that I like her. I didn't known if she like me. To tell you the thouth I am her sikgereatmyer.

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* Portions in italics represent Braithwaite's responses

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Kan Yu Ret an Rayt en Ingles: Children Become Literate in English as a Second Language

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Current research on second language development in children has provided teachers and curriculum planners with multiple possibilities for innovations in classroom practice. In the case of oral language development in ESL, this research has made significant contributions both to classroom teaching and to the materials being published for classroom use. Classroom practices in literacy for ESL children, however, have not kept up with research. This article presents several general findings from recent research on second language reading and writing development in children. These findings suggest: that even children who speak virtually no English read English print in the environment; that ESL learners are able to read English with only limited control over the oral system of the language; that the experiential and cultural background of the ESL reader has a strong effect on reading comprehension; that child ESL learners, early in their development of English, can write English and can do so for various purposes. This article also presents classroom applications for each finding.

INTRODUCTION

During the last ten to fifteen years, significant studies in second language development have provided researchers and practitioners with important information about how children learn a second language. Often this information has been applied to ESL teaching practices and curriculum development. Unfortunately, many of the innovations in teaching children have been limited to or have focused upon oral language (Gonzalez-Mena 1975, Urzua 1981, Ventriglia 1982), with less consideration given to innovation in literacy (reading and writing) practices. In spite of recent research that presents findings with implications for practice, children's ESL literacy is dominated by materials and procedures that have been created with the following perspective in mind: that ESL reading and writing should be strictly controlled so that errors do not occur; that children should be asked to read and write only what they have practiced orally in formal lessons; that early experiences with English reading should consist of "linguistic" materials that emphasize phonically and orthographically regular words; that there should be a time gap between the presentation of oral and written forms of English; that writing, especially at the initial stages, should consist of copying, filling in blanks, and taking dictation rather than creating one's own messages; that reading and writing should always follow listening and speaking instruction, with writing always following reading. Reading materials such as *The Miami Linguistics Readers* (Robinett, Bell, and Rojas 1970), the *Crane Reading System—English* (Crane 1977), and the reading/writing components of programs such as *Steps to English* (Kernan 1983), *English Around the World* (Marquardt, Miller, and Housman 1976), and *YES English for Children* (Mellgren and Walker 1977) exemplify this perspective. Aspects of this position have been articulated in methods textbooks such as those written by Ching (1976), Donoghue and Kunkle (1979), and Finocchiaro (1974), among others. Elley (1981) has suggested that the dominance of these kinds of materials and approaches may be traced to the influence of the audiolingual school of language teaching, whose methods and principles Elley sees in practice in elementary second language classrooms and curricula around the world.

Until recently, the perspective delineated above reflected our understanding of second language literacy development in children. However, in recent years researchers have made exciting discoveries about the growth of reading and writing abilities in children learning a second language. Many of these findings, in addition to coming from descriptive and classroom-based research, have direct implications for and applications to classroom practice. Without intending to reject outright all previous notions or efforts of the past, this article offers some alternative views of second language literacy development in children. This article, then, has two purposes: 1) to provide an overview of some findings of recent research in second language literacy (reading and writing), and 2) to provide some examples of how these findings speak to classroom practice.

RECENT RESEARCH FINDINGS

Finding/Generalization 1

Even children who speak no or very little English are reading some of the print in their environment and are using that reading to increase their English. In the United States, non- or limited English-speaking children find themselves surrounded by English outside of school. These learners acquire a lot of English and often begin reading English from living and coping with English in their daily lives (K. Goodman, Y. Goodman, and Flores 1979).

A few years ago, in several settings, Y. Goodman investigated the print awareness of preschool, supposedly preliterate children, both native English speakers and non- or limited English-speaking children from such native language backgrounds as Arabic, Navajo, and Spanish. She found that even children who were virtually nonspeakers of English in such isolated areas as the Navajo Nation in Northern Arizona could read items such as *Crest*, *Coca Cola*,* *McDonalds*, *Cheerios*, *Wonder Woman*, *Dracula*, and *Spider Man* (Y. Goodman 1980, Y. Goodman and Altwerger 1981, K. Goodman, Y. Goodman, and Flores 1979). They were able to do this because these items from the media and from real life were salient for them. Older non-English-speaking children, too, have demonstrated an ability to read such environmental print items, even though they have resided in the United States for only a month or two (Hudelson 1981). An example comes from a case study of a third grader who, when asked by the researcher about English print in his neighborhood, could tell her that a sign that said *BEWARE OF THE DOG* meant "que no se acerque al perro" ('don't get close to the dog') and that *TVs FIXED HERE* meant "que se compongan televisiones aquí" ('televisions fixed here').

What does this mean for classroom instruction? For teachers who say that children are reading only because they see the entire label and therefore are not really reading, it means little. But for ESL teachers who take this as evidence that children are interacting with and learning from their environment, a host of instructional possibilities appear. Some examples appear below.

A first-grade teacher took her ESL children on a walking field trip around the school. The children had received no formal English reading instruction at the time of this activity. The children's job was to point out, read, and write down all of the English words they could find. If the children were unable to read the print they discovered, the teacher read the word for them. Considerable English vocabulary teaching occurred as the children developed their lists. The teacher read several words to the class (for example, *fire extinguisher*). Others she pronounced with standard English phonology and explained their meaning in English (*custodian* and *caution*). In some cases one child would read for the others. Back in the classroom, the lists were reread and the items were then used in categorizing activities.

In two first and second-grade classrooms, as a substitute for structured ESL time, teachers set up a class grocery store, requesting that students bring in items for the store (in the form of empty boxes, cartons, tin cans, and so on), identify the items, arrange them on shelves as a grocer would, and roleplay grocer and customers. These children also had not received any formal English reading instruction. All transactions had to be conducted in English, and the customers had to write out shopping lists before they went to the store in order to be able to buy their groceries. On the lists that the children wrote and read were such items as *Coors Lite beer*, *pizza*, *soup*, *milk*, and *gum*.

In a combination third-fourth grade, the teacher assigned students to bring in product labels, identify the products, and then describe them orally and in writing. One young writer, who read her paper to the class, described Trix cereal as soft (*sofet*), crunchy (*cranchi*), and lemon and orange flavored (*flavert limen and oreng*).

In a junior high school class, some advanced ESL students working in small groups invented their own products and created commercial messages. Actual television commercials were used for listening/speaking and reading activities before the students came up with their own inventions. One of the commercial messages is reproduced as Figure 1.

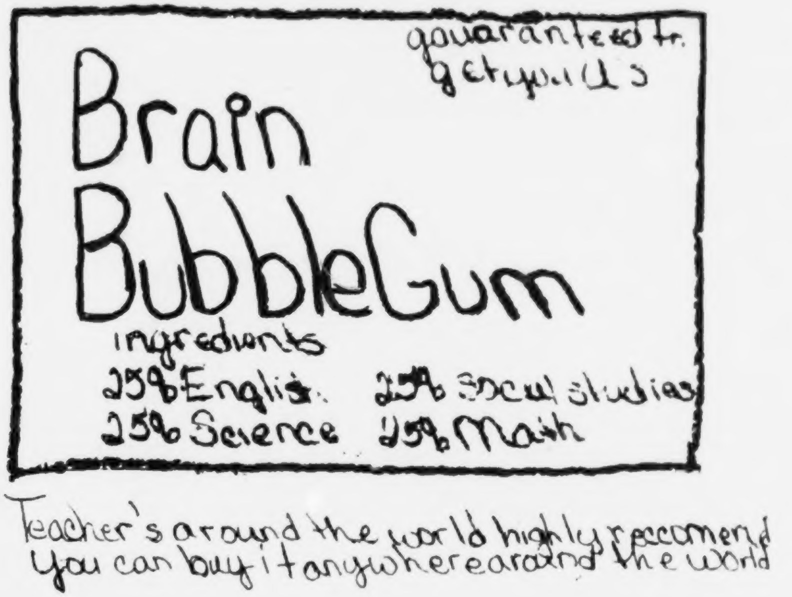
These are a few examples of ways in which ESL teachers have made use of their students' interaction with English environmental print. These teachers have taken advantage of what students already know (and are interested in) in their second language; they have validated this knowledge by bringing it into school and have used it as part of literacy instruction. This instruction has raised children's awareness of themselves as English readers while simultaneously developing and revealing their English vocabularies.

Finding/Generalization 2

ESL learners are able to read English before they have complete oral control of the language. As in a first language, reading in a second language is a psycho-sociolinguistic process, an interaction between reader, print, and the reading situation, an experience in which readers build meaning by interaction with print and by utilizing in these interactions their own background of experiences and personal information as well as their developing knowledge of the language (Grove 1981). Using their language and experiential background, readers predict their way through a text. As ESL readers build meaning, their own levels of language development and their own background influence what is created.

A clear view of the second language reader as a predictor presents

FIGURE 5



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itself when *miscue analysis*, a reading research technique originally developed to examine the oral reading of native speakers of English (K. Goodman and Burke 1973), is utilized. Miscue analysis requires that a person read a story orally and then retell the contents. Both the retelling and the reader's miscues (deviations from the printed text) are examined. In recent years, several researchers have used miscue analysis with ESL readers (Barrera 1978, Clarke 1981, Connor 1981, Devine 1981, K. Goodman and Y. Goodman 1978, Mott 1981, Rigg 1977). Their research has yielded the following generalizations: 1) like native speakers, ESL readers make miscues when they read English; 2) some of these miscues change the meaning of what is being read, while others do not; 3) those miscues that change the meaning of what is being read are more likely to be self-corrected than those that do not; 4) some of the miscues that ESL readers make reflect the reader's English language development; 5) the ESL reader may be able to demonstrate more understanding of material that has been read if retelling is done in the native language rather than in English; 6) ESL readers do not need to pronounce the surface phonology of what they are reading as a native speaker would in order to understand what they are reading; and 7) ESL readers demonstrate greater comprehension of material that is culturally close to their own experiences.

These findings suggest several applications. First, ESL teachers do not need to wait until children are highly fluent in English before offering reading materials. Care must be taken in selecting the kinds of materials to be offered, but reading can and should begin fairly soon after children begin studying English. Second, teachers should avoid judging children's ESL reading ability on the basis of the number of oral reading errors the children make and/or on the basis of heavily accented reading. Informal reading inventories, widely used in elementary school classrooms (see Harris and Sipay 1979), suggest that teachers total the number of oral reading errors in order to determine whether a child is able to read certain material. Applying this practice to ESL readers can be especially misleading since ESL children make many surface errors that do not affect understanding. Rather, the teacher should consider the child's ability to talk about what has been read. Third, teachers should avoid interrupting ESL children while they are reading in order to correct them. Allowing children to make pronunciation errors does not reinforce incorrect English, and the practice of interrupting and correcting may actually disrupt rather than facilitate the readers' construction of meaning from a text. Fourth, in working with ESL children reading English, it is crucial to focus on comprehension of text material. An appropriate beginning is to encourage children to retell as much as possible of what they have read. Specific questions may also be asked, but it is important that the children do as much of the talking as possible in response to a general request to "tell me everything you can about what you just read." Children's retellings often reveal what they *do not* understand as well as what they do. This information is valuable to the teacher in returning the children to the story to re-examine parts of the text. And fifth, when possible (either through the teacher or through peers), ESL children should be allowed to discuss texts in the native language as well as in English. In this way the teacher may get a more accurate picture of what children understand.

Finding/Generalization 3

Reading comprehension in a second language, as in a first, is influenced by the background knowledge and the cultural framework that the reader brings to the text (Grove 1981). Even quite proficient ESL readers recall more from a text based on their own culture than they do from a text based on a foreign culture (Steffensen, Joag-dev,

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and Anderson 1979, Steffensen and Joag-dev 1981). In two studies of ESL readers, Johnson (1981, 1982) found that simplification of vocabulary and syntax were less important factors in ESL readers' comprehension of a text than the cultural contents of the passage being read. She also found that real cultural experiences prior to reading (as contrasted to formal study of vocabulary items) had a positive effect on ESL students' reading comprehension of a passage linked to the cultural experience.

The classroom applications of these findings are several. First, whenever possible the teacher should select reading materials that reflect the children's cultural and experiential background. Children's comprehension also may be enhanced if the teacher utilizes the children's experiences as background preparation for reading. Making the children aware of what they already know about a topic contributes positively to subsequent reading comprehension. Second, as often as possible, if children are reading culturally unfamiliar material, teachers need to build a background of knowledge prior to reading. Ideally this will take the form of a real experience (as in Johnson's example of the Halloween carnival). Knowledge (and language) may also be built through television, films or filmstrips, demonstrations, and materials shared with children. Third, instructional strategies that do not depend upon prepared texts but which utilize the readers' cultural and experiential backgrounds are also appropriate. Two such strategies are the use of key words and language experience stories.

Developed by Ashton-Warner (1963) as a way of teaching non-English-speaking Maori children to read English, *key words* are words that individual children decide they want to learn to read because the words are personally important to them. On a daily basis, the teacher elicits a key word from each child. The teacher writes down each child's word on a card, which the child then retains in order to read the words over, copy them, make a picture of them, read them to others, write sentences with them, and so on. Since Ashton-Warner first proposed the use of key words, the practice has been used effectively in the United States as a beginning reading strategy for both native speakers of English and ESL children (Veatch 1979).

Language experience stories also utilize the students' knowledge and cultural background as well as their developing language (Murphy 1980, Feeley 1979, 1983). Research has shown that the language experience approach is an effective method for teaching reading both to native and non-native speakers of English (Colvert 1973, Hall 1979, Mallett 1977). Basically, the students have an experience which they discuss, after which they dictate to the teacher (scribe) what they want written about the experience. The teacher listens and transcribes the story exactly as the children dictate it. Because both the contents of the stories and the language used come from the students, these stories are especially comprehensible, an important factor in working with ESL students.

Rigg (1981) has utilized language experiences with ESL learners of all ages. Using wordless picture books as the stimulus (experience), she has found that students are willing and able to use their background knowledge to create stories. To address the concern that accepting children's stories as dictated reinforces their incorrect language patterns, Rigg has demonstrated that first draft stories may be used as the basis for oral language activities (diagnosing which structures to practice from their dictations) as well as for revising and editing by the students. In the example below, a Russian-speaking student dictated two stories using picture stimuli. Each of the stories was subsequently corrected by the student without being prompted to do so.

First Effort	**Self-Revision**
Two ladies playing in tennis. In the hand they holding the rackets. One from they is coming to the ball.	Two ladies are playing in tennis. In the hand they are holding the rackets. One from they is running to the ball.
The boy live in the ranch. He help for his parents. He give the food for the cocks. . . The cows eat the grass and he watch for them.	The boy lives on the ranch. He helps his parents. He gives the food for the cocks. . . The cows eat the grass and he watches them.

(Rigg 1981:85)

The second drafts suggest that many ESL learners are able to reflect on the form of what they have said and have seen written down and that they are able to make revisions as they learn more English. The drafts also are useful to the ESL teacher as a way of documenting student learning.

Students learning English as a second language, then, show teachers both that they are able to read and understand some material in English that they do not yet control orally and that they are able to read English when the material comes from within themselves, that is, when the approach used is an organic one that relies on what the students know rather than on what they do not know.

Finding/Generalization 4

As in a first language, writing in a second language interacts with reading. The two processes are closely related and complement each other (Edelsky 1982, Staton 1981). Bissex (1980), Chomsky (1971), and Read (1975) have demonstrated that for some young native speakers of English, writing—the composing of one's own message—precedes formal reading. These messages generally are characterized by a variety of unconventional aspects (for example, spelling and segmentation) which signify that the young composers use their existing knowledge to solve their writing problems. These researchers have also shown that these young writers read their own creations, often before they read conventional English texts. Bissex discovered that Paul, the child in her longitudinal case study, used his writing as his personal reading material for several months.

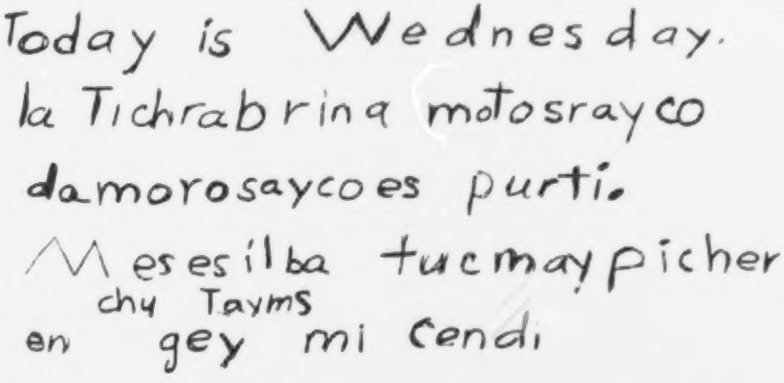
What has been found for native speakers is also being shown to be true for child second language learners. For some ESL children, written expression in English may precede formal reading instruction (Edelsky 1982). For some, their English writing forms their first reading (Rigg 1981). For others, writing may help other school work (Searfoss, Smith, and Bean 1981, Staton 1981).

The classroom application is this: we should encourage ESL learners to write, to express themselves in writing as well as orally, and to use written expression as one means of developing English. The previous examples have shown that ESL speakers can write shopping lists and product descriptions based on environmental print. Other kinds of writing also have been encouraged by teachers who consider writing an integral part of second language development.

Figure 2 is a journal entry from a first-grade child enrolled in a bilingual program where initial literacy, including a great deal of writing, was in Spanish (see Edelsky 1981, 1982, 1983). With no formal literacy instruction in English, one day late in the spring the child produced this journal entry in English when the teacher asked the class if they could write in their journals in English rather than in Spanish.

In reading the entry, the influence of Spanish on English is obvious. But looking beyond the invented spelling, one is struck both by the ability of this child to express himself in English and to reveal what he already knows about English, without having received training in that language. This child was not afraid to try to write in English, and he read what he wrote.

FIGURE 2



Today is Wednesday.
la Tichrabrina motosrayco
damorosaycoes purti.
Mesesilba tucmaypicher
chy Tayms
en gey mi cendi

Today is Wednesday.
La teacher bring a motorcycle
The motorcycle is pretty.
Mrs. Silva took my picture
two times
and gave me candy

Older ESL students may express themselves more easily in writing than orally. The following journal entry was written by a fourth grader described by her teacher as extremely shy in class. At the time of the writing, this child had been in the United States less than two years. In her writing this child expressed several personal feelings that perhaps she was unwilling or unable to say out loud. Her incomplete mastery of English did not prevent her from using her journal to express some things that were on her mind.

> Some girl act beautiful cause shake their but and has feather back hear and act big. And they act smart ibe day I was playing woth Pola and somebody called me to the teetotter and told me not to play with pola because she would make me black. I feel that are are bad becuase they dress in tight pants tight shirt becuase they act that they could beet up everibody
>
> (Spelling, punctuation, and word choice have not been changed.)

In middle school settings, interactive journal writing has been used to promote student expression (Staton, Shuy, and Kreeft 1982). In this practice, students use daily journals to write to their teacher about whatever they choose to discuss. The teacher writes back to

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them responding to content, not form, and creates a written conversation. The use of interactive journals has been studied using both native and non-native speakers of English (Staton 1981, 1983). The findings suggest that ESL students are able to make progress toward understanding and producing more formal discourse by using the less formal, more "oral" style of a journal. The research has also documented that, for ESL students, the journals become a vehicle for obtaining information about school subjects and about English (Staton 1981).

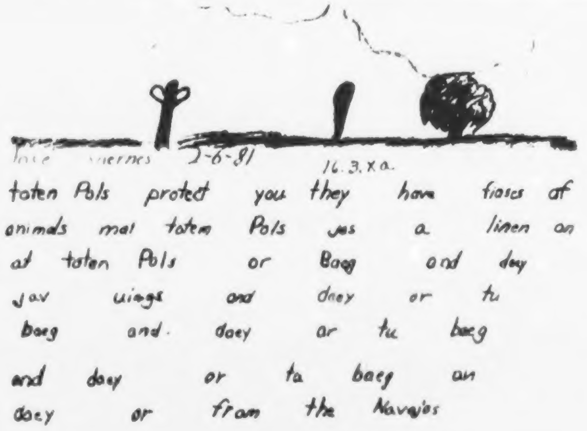
ESL writing may also play a role in content area construction. In second-grade social studies, for example, a class of limited English speakers studied several Native American tribes. During class time set aside for ESL, the teacher told the class about each tribe, and the class then participated in such activities as creating sand paintings, constructing totem poles, and making dioramas. The teacher shared some books about Indians, but no formal reading was required. At the end of the unit, the teacher asked the students to write about something they had learned. One child wrote what appears in Figure 3, using writing to reflect upon what he had studied.

For ESL students working with content area textbooks, the use of the "guided writing procedure" may contribute both to ESL students' understanding of text material and to their ability to express that understanding in writing (Searfoss, Smith, and Bean 1981). The guided writing procedure involves children in brainstorming what they know about the topic they will read about, putting their knowledge in writing, reading and discussing the text, and writing again. Writing serves both to set expectations for reading and to provide a mechanism for rethinking the contents of the text.

Finding/Generalization 5[1]

ESL learners can (and should) write English before they have complete control over the oral and written systems of the language. Second language acquirers' written products reflect their language development at a given point in time. As learners gain more control over the language, their writing will reflect this development (Hudelson 1983). Consider these examples (see Figure 4) from a second grader from Puerto Rico who was enrolled in a public school in Florida. They were gathered by an ESL tutor who encouraged the child's early and continued written expression but did not correct the writing efforts.

FIGURE 3



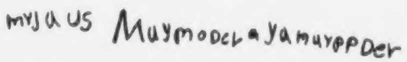
Jose viernes 2-6-81 16.3.xa.

toten Pols protect you they hava fiases af
animals mai totem Pols jas a linen on
at toten Pols or Baeg and day
jav uings and daey or tu
baeg and daey or tu baeg
and daey or ta baeg an
daey or fram the Navajos

totem poles protect you. they have faces of
animals my totem pole has a lion on
it totem poles are big and they
have wings and they are too
big and they are too big
and they are too big and
they are from the Navajos

FIGURE 4

October

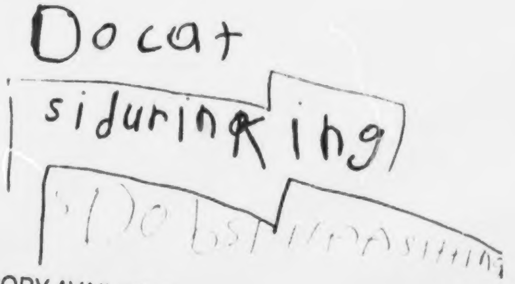


myjaus Muymodel a yamuyppDer

myjaus may model ayamayppder

my house my mother and my father

December



Docat
siduringking
sDobstifasithing

Do cat
si durinking
sDobsitifasitting

The cat is drinking

Dog sit Tiff is sitting

---

[1] Although this generalization relates closely to the one just discussed, it merits separate comment because many elementary level ESL teachers fear that if they allow children to write "incorrectly" they will contribute to the children's continued use of those forms.

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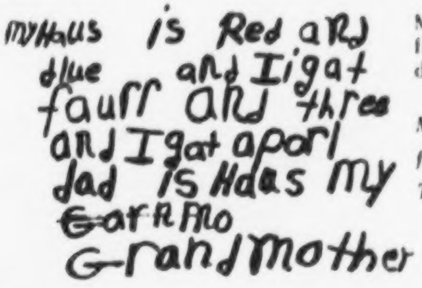
FIGURE 4 (Continued)

March

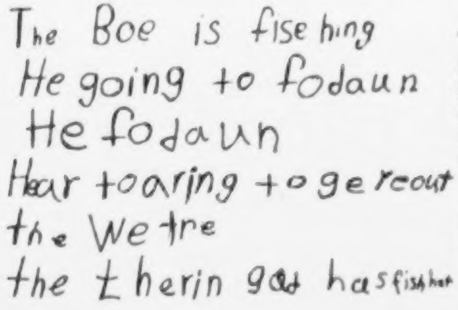


myHaus is Red aRd
dlue and I gat
faurr aRd three
aRd I gat aporl
dad is Haas my
~~Ga~~rRMo
GrandMother

My Haus is Red and dlue and ligat
faurr and three and I gat aporl
dad is Haus my grandmother

My house is red and blue and I got
flowers and trees and I got apples
That is house my Grandmother

May



The Boe is fisehing
He going to fodaun
He fodaun
Hear toaring to gereout
the wetre
the therin gad has fishhat

The Boe is fisehing
He goin to fo daun
He fo daun
He toaring to gereout
the wetre
the therin gad has fish

The boy is fishing
He going to fall down
He fall down
He trying to get out the water
The turtle got his fish

Other Samples from May

The dog going fighting
with the turtle
the turtle going
bite the dog
the boy going to
take the dog and the turtle
going bite the dog

The boy take the dog
He take the dog
He put he tail in the water
He fall down
He going jump to take
the dog to the water

The turtle dies
He going to XXXX out
The boy take the
turtle in his
hand and the frog and the
dog going walking
the boy digging the hole

In October this child hypothesized that English was spelled like Spanish, and while she was unable to write sentences, she did come up with a phrase she knew. By December the overwhelming influence on her writing was the material (*The Miami Linguistic Readers*) she was reading in her classroom. She was willing to write only what she thought she could spell correctly, what she had copied in class. In February and March she began to use some of the words she had learned to read in her classroom, but she was also willing to predict the spelling of words that were in her oral vocabulary even though they were not in her spelling repertoire. As the school year continued, she used a combination of reading words, words from spelling, and words for which she invented the spelling. She also became more willing to venture beyond the safe topic of her house. Over time, both the quantity and quality of her writing improved. Although in May she still did not demonstrate complete control over the oral or written systems of English, she did exhibit growth in her ability to express herself in English. Additionally, her writing over time helps the teacher document her progress in English.

This child's writing was nurtured by a situation in which the adult working with her believed that she was capable of writing in English while still acquiring and refining the language. This ESL tutor encouraged the child's writing with the awareness that it would develop over time and believed that the mistakes this child made were an integral part of her growth as an English user.

Finding/Generalization 6

As many examples in this article illustrate, the processes of writing, reading, speaking, and listening in a second language are interrelated and interdependent. It is both useless and, ultimately, impossible to separate out the language processes in our teaching (i.e., to attempt to teach only listening or speaking or only reading or writing, although some elementary ESL curricula still try to do so), or to try to present ESL material in a linear sequence of listening, speaking, reading, and writing. The examples presented here refute both that separation and that notion of sequencing. Second language learners demonstrate that they are dealing with and making sense of language as a totality rather than dealing with the language processes as separate entities.

CONCLUSION

Research on second language literacy in children has the following applications. Teachers should: 1) give children credit for interacting with and acting upon their environment; 2) use the students' lives and living environments for literacy experiences (that take advantage of what students know); 3) ask children both to respond to and to create meaningful language in meaningful contexts (that is, listening to or reading whole texts and writing for real purposes, as compared with filling in ditto sheets and labeling parts of speech); 4) realize that mistakes are a necessary part of second language development and, that they are critical to language growth; and 5) respond to student products, whether oral or written, more as work in progress (Graves 1982) than as final product by reacting primarily to what students are trying to express and only secondarily to form. These kinds of activities will help English as a second language learners in elementary schools to become the proficient users of English that all teachers want them to be.

■

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BRIEF REPORTS AND SUMMARIES

The *TESOL Quarterly* invites readers to submit short reports and updates on their work. These summaries may address any areas of interest to *Quarterly* readers. Authors' addresses are printed with these reports to enable interested readers to contact the authors for more details.

Edited by D. SCOTT ENRIGHT
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The Bilingual/ESOL Curriculum Framework of the Denver Public Schools

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■ Today a major concern of educators working with linguistically diverse students centers on how to address the specific academic, linguistic, cognitive, and social needs of these students on a day-to-day basis in the classroom. Unfortunately, our limited English proficient (LEP) students' needs are rarely addressed in the development of the typical, mainstream curriculum. Instead, curriculum is usually developed with the generic "average" student in the generic "average" classroom in mind. To make matters worse, the specific content and the mass of detailed objectives, lessons, procedures, and evaluations that are the product of this curriculum development process leave little room for individual teachers to interpret and/or modify the curriculum to take into account their LEP learners.

With these concerns in mind, the Director and staff of the newly enlarged Bilingual/ESOL Education Program of the Denver Public Schools (DPS) set out to devise a curriculum that would provide teachers in the program with a common focus and instructional goals but that would also allow them to develop, organize, and refine their own individual methods and techniques in order to meet the specific and changing needs of the students in their classrooms.

The result was a curriculum framework that (a) utilizes all four language processes (listening, speaking, reading, and writing) and the cognitive process as vehicles for promoting academic achievement; (b) is interdisciplinary, with the teacher as the overall manager, organizer, facilitator, and classroom developer of the various curricula; (c) is student centered and experience based, with students as active participants in the development and implementation of learning activities; and (d) is flexible and responsive to each student's individual learning style, language proficiency, and cognitive development.

This concept of curriculum is a process by which the student is empowered to participate effectively in a changing, culturally diverse society. It is based on recent developments in the areas of first and second language acquisition research as well as on sound and well-documented pedagogical techniques. Because this curriculum centers on how content is presented rather than on specific content, it guides instruction in bilingual and ESL classrooms in Grades K-12, in both self-contained and pullout situations. It also forms the backbone for the inservice training of teachers and paraprofessionals as well as for Spanish classes for teachers and other District personnel. The framework guides all instructional activities undertaken by the Department of Bilingual/ESOL Education.

A VISUALIZATION OF THE CURRICULUM FRAMEWORK

The DPS Bilingual/ESOL Curriculum Framework, depicted in Figure 1, is visualized as 10 interactive components of effective instruction enclosed by an outer circle of affective variables, which also contribute to effective instruction. The entire curriculum is driven by three forces—language and thought, teaching styles, and learning styles.

The wheel-like pattern of Figure 1 indicates motion and emphasizes a view of curriculum as process rather than product. Thus, the curriculum is not a list of specific skills to be taught at each grade level, but an ongoing utilization of materials and techniques that reflect the most current findings on how children acquire oral and written language. The 10 components that actually comprise the wheel are instructional factors that have been identified through research as having a positive effect on the success of LEP students in an academic setting. A brief explanation of each of the 10 components and of the other features of the model is presented below.

AN EXPLANATION OF THE COMPONENTS AND FEATURES OF THE FRAMEWORK

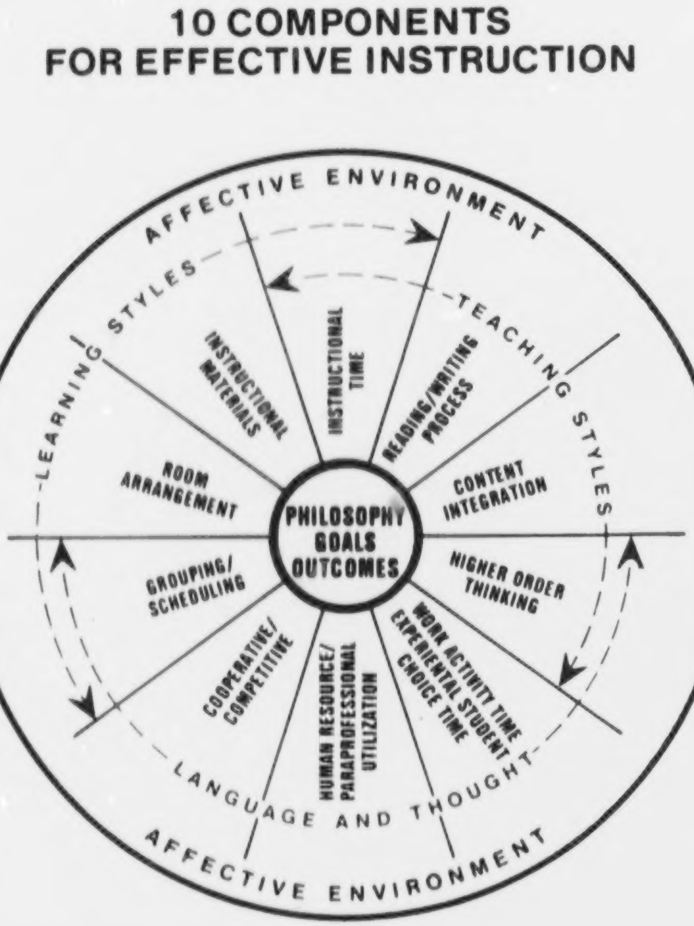
Instructional time refers to the effective utilization of the student's first and second languages in the classroom. Teachers show that both languages are valued by balancing interactional opportunities during instruction (Cummins, 1984; Wong Fillmore & Valadez, 1986).

The *reading/writing process* emphasizes integrated skill development in the interaction of all four language processes in order to develop student proficiency in gathering information and producing meaningful communication (Calkins, 1986; Goodman, 1986; Flores et al., 1985; Smith, 1973).

Content integration is managed by organizing subject matter around topics or themes reflective of the students' interests and the scope and sequence of the District's curriculum objectives. The content is used as the medium to develop language proficiency and academic competence (Chamot & O'Malley, 1986; Enright & McCloskey, 1988; Mohan, 1986

Higher order thinking skills are developed through the use of questioning strategies and activities that allow the student to process meaning at higher cognitive levels (Bloom, 1956; Sternberg, 1987; Vygotsky, 1934/1986).

FIGURE 1
Denver Public Schools
Bilingual/ESOL Curriculum Framework


10 COMPONENTS
FOR EFFECTIVE INSTRUCTION
AFFECTIVE ENVIRONMENT
LEARNING STYLES
TEACHING STYLES
LANGUAGE AND THOUGHT
AFFECTIVE ENVIRONMENT
PHILOSOPHY
GOALS
OUTCOMES
INSTRUCTIONAL MATERIALS
INSTRUCTIONAL TIME
READING/WRITING PROCESS
CONTENT INTEGRATION
HIGHER ORDER THINKING
WORK ACTIVITY TIME EXPERIENTIAL STUDENT CHOICE TIME
HUMAN RESOURCE/ PARAPROFESSIONAL UTILIZATION
COOPERATIVE/ COMPETITIVE
GROUPING/ SCHEDULING
ROOM ARRANGEMENT

Work activity time is high-interest, experiential student choice time. The student initiates an activity by proposing a learning plan, actualizes that plan, and then shares a representation of the activity with a group (Piaget, 1936/1966).

Human resource/paraprofessional utilization is the fostering of an interdependent relationship between school personnel and the community in order to promote literacy (Cervantes, Baca, & Torres, 1979).

Cooperative/competitive learning involves the placement of students homogeneously and/or heterogeneously in large or small groups in order to enhance active language interaction and academic participation in the classroom (Kagan, 1985; Ramirez & Castañeda, 1974).

Grouping/scheduling refers to the opportunity that each student has to participate in a variety of group structures. It also refers to the balance of target and nontarget students in bilingual classrooms and to scheduling ESOL instructional time (Wong Fillmore & Valadez, 1986).

Room arrangements are flexible and conducive to the learning styles of the students. They match the environment to the task (Enright & McCloskey, 1988).

Instructional materials are selected and integrated to match the learning styles of the students (McCarthy, 1981).

These 10 components are interactive aspects of the overall classroom. The mode of instruction is inseparably linked to the curriculum and materials used in the classroom as well as to the learning styles of the students. They are intertwined so that each reflects the others.

The *affective variables* surrounding the 10 instructional components incorporate techniques for lowering the affective filters that may vary from group to group because of the different personalities, interests, and aims of students and their teachers. As Krashen and Terrell (1983) see it, the lowering of the affective filter allows students to participate more fully in the instructional process. LEP students will be more likely to take learning risks when the affective environment of the classroom is secure. This risk taking involves active experimentation and reflective observation using language within the ongoing learning environment.

Of the three major forces that drive instruction within the DPS Bilingual/ESOL Curriculum Framework, the first and foremost is *language and thought*, the idea that thought and its articulation in the first and/or second language of the student are inextricably bound together. Using this force to drive the curriculum results in thinking and using language to think and to communicate thoughts as the real "content" of the classroom. The *teaching style* of individual teachers, the second force, creates an atmosphere conducive to language acquisition and learning. The third force, the students' *learning styles*, also affects how the 10 components are actually formulated and carried out. Research indicates that students gather and process information, as well as exhibit their learning, in a number of different ways. Often these differences are a product of students' previous cultural and learning experiences. Teachers can build on the individual learning-style strengths of students while gradually guiding them to function with other styles.

Teachers' full understanding of their own personal teaching style, combined with a thorough familiarity with the learning styles of their students and the concept of language and thought as the critical content of instruction, will lead to the effective use of the 10 components to promote the linguistic and cognitive development of LEP students. Each of the 10 components is influenced by these three forces, although the relationship may vary across the 10 elements.

CONCLUSION

This framework is continually evolving and changing. Because it is based on current research in the areas of second language acquisition and effective instructional strategies, the model will continue to be revised to reflect the latest findings. Research within the District and feedback from teachers based on their experiences using the framework will also continue to have an impact on the model. This ongoing process ensures that the model itself will remain fluid and flexible to the needs of its users. Even more than to flexibility, the curriculum owes its success to the participation of parents, students, teachers, paraprofessionals, and administrators to effect change that will promote success for students.[1]

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[1] The curriculum framework was developed with ideas generated by Dr. Dale Vigil, Director, Christina Bernal, Nancylee Le, and Janet Ramsay, Curriculum Writers, and Lucia Aandahl, Barbara Allen Alverado, Mary Angela Bodenhamer, Ana Garcia-Gustafson, Dr. Tom Jones, Dr. Bonnie Scudder, Glenda Tafoya, and Ronna Winterton of the Department of Bilingual/ESOL Education, Denver Public Schools.

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ESL: The Regular Classroom Teacher's Perspective

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A large number of limited English proficient (LEP) students in the United states spend only a small fraction of their school day with ESL teachers. Yet regular classroom teachers are unprepared in how to integrate the LEP student into the regular classroom. This article analyzes the results of a survey of regular classroom teachers' perceptions of LEP students and ESL teachers. An open-ended questionnaire was administered to 162 New Jersey teachers who had LEP students in their classrooms but who had had no training in ESL. A content analysis of the responses revealed five broad categories of concern: programmatic setting and instruction, training needs, LEP students and their parents, peer interaction, and the role of the ESL teacher. The responses indicate the difficulties which regular classroom teachers encounter in integrating LEP students socially and academically into the regular setting. Accordingly, it is recommended that ESL teachers and teacher training programs devote greater attention to preparing the regular classroom teacher for dealing more adequately with the educational needs of LEP students.

Despite the increase in the number of trained ESL specialists over the past 10 years or so, it is no secret that vast numbers of limited English proficient (LEP) students still spend either all or large portions of their academic life with regular or content classroom teachers. (The term *regular teacher* is used here instead of *mainstream teacher* to avoid a connotation that many find offensive and misleading. The *regular classroom* refers to a setting in which subject matter and literacy skills are taught entirely in English and the majority of the students are native speakers of English.) In most cases, these teachers have no training in how to deal with LEP students. The 1980-81 Teachers Language Skills Survey of public school teachers in the United States revealed that although half of all public school teachers had current or previous experience with LEP students in their classes, only 6% had taken one or more academic or nonacademic courses to learn how to teach such students (*NABE News*, 1984; O'Malley & Waggoner, 1984; Waggoner & O'Malley, 1985). Given the trend in school populations, it is projected that by the year 1990 language minority children will account for 25% or more of all school-age children in the United States (Bell, 1984).

Few regular teachers have had training in how to integrate the LEP student into the regular classroom. Too often when ESL teachers attempt to assist the regular classroom teacher, they encounter resistance and a lack of cooperation which impedes their ability to improve the quality of education for LEP students in regular classrooms. Regular teachers, for their part, sometimes express anger, frustration, and unwillingness to deal with "the new burden" placed upon them in having a few LEP students in their classrooms.

ESL teachers themselves often express perplexity when trying to understand the beliefs and assumptions with which these same teachers operate. What are regular teachers' beliefs and assumptions about ESL? What are their perceptions of LEP students? What do they view as their role and the role of the ESL teacher vis-à-vis the LEP student? What training needs do they perceive they need to deal with LEP students? This article reports on a survey which attempted to address these fundamental questions.

ESL research has paid scant attention to the relationship between the ESL specialist and the classroom teacher or to the perceptions and attitudes of regular classroom teachers toward LEP students. Gregor (1981) has offered practical suggestions on how the ESL teacher might establish a good working relationship with classroom teachers, but she did not deal with the underlying differences in perceptions which cause the poor working relationship to exist.

Teacher assumptions and beliefs about LEP students and about second language development do play a significant role in the teaching-learning process in the classroom (Cohen, 1972; DeAvila & Duncan, 1980). Carter and Segura (1979), for example, found that teachers of Mexican American children tended to associate a lack of oral English proficiency with deficiency in other abilities.

One field which has contributed research on the impact of teacher beliefs upon the learner is special education. Of particular interest has been the willingness of regular teachers to integrate special education children into the regular classroom in accordance with Federal Law 94-142, which introduced mainstreaming as a requirement (Pernell, McIntyre, & Bader, 1985). Larrivee (1981) noted that the manner in which regular classroom teachers responded to the special child's needs was a more potent variable in ultimately determining the success of mainstreaming than any *administrative* or *curricular* strategy. Others (Gearheart & Weshahn, 1976; Gottlieb, 1975; Schmelkin, 1981) have suggested that the "climate within which mainstreaming is to be implemented" (Schmelkin, 1981, p. 42) is one of the most significant determinants of its outcomes.

ESL research has begun to demonstrate the effects which the social organization of the classroom has upon the second language development of LEP students and the critical role which the teacher plays in constructing social opportunities for learning (Enright & McCloskey, 1985; Johnson, 1983; Wong Fillmore, 1982). What has received less attention are those beliefs and assumptions held by regular teachers and students which interfere with the social and academic integration of LEP students into a regular classroom setting.

The survey described below explored the regular classroom teachers' perceptions of LEP students and their parents, of ESL specialists, and of their own needs in working with LEP students in their classes. The implications of this survey for teacher training are discussed and concrete suggestions offered for improving the preparation of regular teachers who have LEP students in their classrooms.

METHOD

Design

This survey of regular teachers' perceptions of LEP students and ESL teachers was based on a qualitative research paradigm in the phenomenological tradition (Bogdan & Biklen, 1982; Bogdan & Taylor, 1975). The object of such an approach to inquiry is to gain entry into the conceptual world of respondents by attempting to understand what meaning they construct around events in their daily or work lives and how this meaning is constructed. The goal of this study was to uncover the regular classroom teachers' implicit beliefs and assumptions about those whom they teach and those with whom they work—*from their own point of view*. Since a predetermined framework was not assumed, specific hypotheses were not tested. The data collected were descriptive in nature and served as an initial step toward constructing the regular teachers' conception of reality by identifying the issues of concern to them and their attitudes toward those issues.

The tool for data collection was a survey instrument consisting of 15 questions, most of which were open-ended. (See Appendix; the term *ESL students* was used on the questionnaire to refer to LEP students because, in general, the teachers were unfamiliar with the term *LEP*.) Written comments made by the respondents constituted the primary data base. This use of commentary derives from Mathiot's (1982) "self-disclosure technique," which assumes that respondents reveal their perceptions of reality by how they talk about the events and people in their lives (see also Penfield & Mathiot, 1985). (Self-disclosure first elicits verbal comments from the respondent over many hours of face-to-face interviewing and then guides the respondent in commenting on his/her own remarks and the meaningful categories in these remarks. Obviously, the entire procedure was not used here, merely the first step—eliciting comments.)

It is argued that an open-ended format is more flexible and lends itself to less distortion of the respondent's reality. This was confirmed many times in the survey in this study. For example, at least 26% of the respondents refused to provide an exact number of hours or portion of the school day which the LEP student should spend with the ESL teacher (Question 11). Instead, they commented that this should be adjusted to the proficiency of the student. A forced numerical choice would have distorted their view of reality.

Open-ended questions in the survey elicited comments on topics of concern to the teachers. Most questions were sufficiently general to permit respondents to comment on topics which they themselves introduced. Questions 7 and 9 were especially helpful in eliciting new topics of concern. For example, Question 9, which deals with the subject of discipline, elicited instead comments about the respondents' perceptions of ethnic groups.

Respondents

A total of 179 questionnaires were distributed to regular classroom teachers immediately before required inservice workshops on LEP students in the classroom. The workshops were given by the investigator and two of her colleagues in public schools in New Jersey. Respondents consisted of regular classroom teachers who currently or had previously had LEP students in their classes and who had had no training in how to teach LEP students. Questionnaires were completed and handed back to the investigator within 20 minutes. Insufficiently completed questionnaires and those completed by respondents who had never had LEP students in their classrooms were eliminated, leaving 162 questionnaires as the data base for the analysis.

Respondents represented six counties in New Jersey and taught in large urban school districts, such as Newark and Jersey City ($n = 52$; 32%); suburban districts, such as Morris School District, Chatham, Franklin Township, and Old Bridge ($n = 102$; 63%); and smaller urban districts, such as New Brunswick ($n = 8$; 5%). Among the countries represented by the LEP students whom these teachers taught were Vietnam, Laos, Pakistan, India, Taiwan, Philippines, People's Republic of China, Japan, Korea, Puerto Rico, Haiti, Afghanistan, and some of the countries of Central America. The vast majority of the LEP students came from Taiwan, India, and Puerto Rico.

Of the total number of respondents, 85% ($n = 137$) taught in Grades K-8 and the remainder ($n = 25$) in Grades 9-12. The amount of time per day they taught a class with one or more LEP students in it ranged from 30 minutes to a full day. More than four fifths of the respondents ($n = 132$) had fewer than six LEP students during their school day.

Analysis

The written comments in the survey served as the data base for inferring how respondents perceived the LEP students, the ESL teacher(s), and themselves. In the first stage of the analysis, those comments which directly answered the questions in the survey were examined. Where possible, open-ended comments were classified according to categories prompted by a specific question in the survey.

A content analysis on all the written comments in the survey was then conducted. The topics of the comments rather than the questions in the survey served as organizers of the data so that the voice of the respondents could be heard. The comments revealed five broad categories: (a) programmatic setting and instruction, (b) training needs, (c) LEP students and their parents, (d) peer interaction, and (e) role of the ESL teacher. A more detailed content analysis was then carried out by the investigator in order to create an inventory of different perspectives within each of the five broad categories. Comments which differed in content were listed under their relevant category until an exhaustive list was obtained. The exact wordings used by the respondents in these comments form the basis of the Results and Discussion section. These comments provide a realistic view of the respondents' perspective.

The study described below represents the first part of an ongoing research project dealing with the academic and social integration of LEP students into the regular classroom setting. In the next stage the investigator plans to utilize in-depth observation in classrooms and extensive elicited commentary from a few regular classroom teachers in order to identify problems preventing academic and social integration of LEP students in regular settings.

RESULTS AND DISCUSSION

Programmatic Setting and Instruction

Question 5 of the survey asked respondents to choose which of five programmatic approaches they favored for LEP students and why. Table 1 illustrates that a majority of the respondents (61%) viewed the regular classroom setting as better suited for LEP students than a segregated setting. A smaller number (21%) preferred the bilingual education setting, and an even smaller number (18%) chose a self-contained or ESL-only setting.

TABLE 1

Teachers' Responses on Programmatic Approach Best Suited to LEP Students

Programmatic approach	*n*	%
Regular classes only	46	30
Regular classes + an ESL class	47	31
Bilingual education	32	21
Only ESL	27	18

Note: Total number of responses for this question was 152.

No doubt some of the responses to this question reflect sociopolitical attitudes toward language education policies. One respondent was very emphatic: "Once in America, the ESL student should learn in English, not their native language." Two respondents wrote a large "NO!" next to the bilingual education choice.

When asked at what point in their language development LEP students should be placed in the regular classroom for the entire day (Question 5), one teacher responded: "After crossing the border." But many respondents suggested that LEP students be placed in the regular classroom only when they could understand oral English sufficiently to follow directions and instructions given by the classroom teacher. A small number of respondents felt that LEP students should enter the regular classroom as soon as possible so that they would not become isolated from other students. Other comments reflected a fear of the LEP student's impact upon the regular classroom: "They should be mainstreamed when they can respond without retarding the progress of other students."

Question 11 asked respondents what portion of the school day LEP students should spend with an ESL teacher. Table 2 shows that 26% of the open-ended responses indicated the need for adjusting the amount of ESL instruction to the student rather than choosing a specific number of class periods. These respondents demonstrated sensitivity to the need for ongoing language assessment and program flexibility. Very few of the respondents (2%) believed that the LEP student should not spend any time with the ESL teacher, while at the other extreme a greater proportion (12%) supported the idea of LEP students' spending an entire day with the ESL teacher. The majority of respondents (60%) favored from one to six periods per day.

TABLE 2

Teachers' Responses on Number of Periods Which Should Be Spent With ESL Teacher

Adjust to student	0	1	2	3	4	6	8
26	2	15	16	7	18	4	12

Note: Total number of responses for this question was 100.

A few comments suggested that LEP students miss out on content and opportunities for language development when they leave the regular classroom:

> Missing 20 or 30 minutes per day from their regular class is detrimental. They should not miss their art, gym, library, or music periods. They lose out on either a structured lesson, which they really need, or activity time, where free play would improve their language.

When regular teachers do teach LEP students content, they find certain subjects relatively easy to teach and others very difficult. Of the respondents, 71% mentioned math as the subject easiest to teach LEP students, and 83% chose language arts, especially reading, as the most difficult subject areas to teach (Question 6). Another 23% of the respondents mentioned social studies and science as the next subject areas most difficult to teach. These responses obviously point to those subject areas in which the least or most amount of English is involved.

While the integration of LEP students into the regular classroom was considered desirable to the respondents, it was also viewed as problematic. Some respondents recognized the potential that an integrated setting would provide for L2 development, but at the same time they feared the effect it would have upon the regular students and, perhaps by inference, upon their own style of teaching.

Without doubt, the LEP student poses a serious challenge to those who follow a traditional mode of classroom organization. As these teachers become aware that a teacher-centered, traditional approach does not work for the LEP student, they find themselves in need of making changes but without the appropriate training to do so. As a result, many LEP students remain isolated and segregated amidst one of the richest sources for intellectual and L2 development—social interaction with their English-speaking peers. Second language classroom researchers have agreed that social interaction brings access to linguistic input, which in turn results in L2 development (Hakuta, 1986; Wong Fillmore, 1979). Those classroom climates which enhance social integration provide the greatest amount of access to L2 and academic development for LEP students.

The responses of the regular teachers demonstrate that they understood the need to improve academic learning for LEP students, yet they appeared to have little knowledge of how to integrate content and L2 development, viewing these two as separate and distinct rather than as an integrated process in which both they and the ESL teacher should participate.

Finally, respondents reported that math, spelling, and phonics were easiest to teach to LEP students. This accords with recent classroom observations reported by Wong Fillmore (1986), suggesting that what LEP students are being taught are mechanical skills and facts rather than conceptual understanding. If viewed as purely mechanical and computational, mathematics may be "easier to teach," since it would entail little talking or thinking—it is basic, memorizable, and quiet.

Training Needs

Respondents were asked to comment upon their frustrations and assess their own needs (Questions 7 and 10). The most frustrating experience for regular classroom teachers was their inability to communicate with LEP students and their parents. As one teacher commented, "I'm directing a class of 25 students and I see an LEP student who sits there with a blank look on his face. I wonder what he is understanding."

Several respondents observed that the use of regular textbooks and curriculum provided little flexibility for meeting the cultural and individual learning needs of LEP students. They noted that LEP students could not complete the same class work as monolingual or English-dominant students.

The vast majority of the respondents recognized the gap in their own knowledge of how to handle LEP students. Question 10 asked classroom teachers to select three ways (from six choices) that would help them deal more effectively with LEP students (see Table 3). The most frequently selected response was the need for more training on how to teach content to LEP students. This was especially true for those teaching Grades 9-12. Teachers expressed the need for access to appropriate curricular materials; most preferred the ESL teacher to prepare these materials for them. Although teachers were not asked to comment on this question, relevant comments emerged from other survey questions. One teacher assessed the problem in the regular classroom in the following way: "I feel I should provide more meaningful 'busy work' when I'm teaching the rest." The frustration of another was summarized succinctly: "No time, no materials, no parents!" By contrast, a third teacher's comment reflected sensitivity: "Teach me Spanish." Perhaps the comment that revealed most clearly the challenge which LEP students pose to the regular teacher's general style of teaching was the following: "They make the teacher use teaching techniques which must be individualized and varied."

TABLE 3

Teachers' Responses on Most Helpful Ways to Deal Effectively With LEP Students

Most effective means	Most frequently selected	*n*
Techniques on how to teach content to LEP students	1	88
Materials prepared by the ESL teacher for LEP students in regular classrooms	2	76
More familiarity with materials for LEP students	3	66
Better communication between ESL teachers and regular teachers	4	65
More time to adapt regular assignments/lessons to LEP students	5	65
Information about cultures represented by LEP students	6	34

Many respondents felt a strong need for appropriate content curriculum materials adapted to the LEP student. Student materials as well as teacher resource books are indeed being created which will meet these needs (Cantoni-Harvey, 1987; Chamot, 1986; Chamot & O'Malley, in press; Enright & McCloskey, in press; Mohan, 1986a; Penfield, in press). However, resource materials alone, though they may be a quick, short-term solution, cannot solve the complex problems of the academic and social integration of the LEP student in the regular classroom setting. The teacher plays a key role in creating and controlling the social climate and organization in the classroom. If the LEP student is to gain anything significant from the use of these materials, regular teachers must learn new ways for improving classroom dynamics (Enright & McCloskey, 1985; Johnson, 1983; Milk, 1985; Mohan, 1979, 1986b).

LEP Students and Their Parents

Questions 9 and 14 in the survey dealt with the relationship between the classroom teacher and the LEP students and their parents. In judging whether LEP students were easier, more difficult, or the same as regular students to discipline, 45% of the respondents who answered this question asserted that they were easier to discipline (see Table 4). This answer was often accompanied by the labels *passive* and *introverted*. Such a view of the LEP student may indeed reflect neglect, as one respondent's comment suggests: "They get lost and tune out. It's easy to forget them because they don't demand attention." Another respondent even pointed to the unfortunate result of this process: "Many upon arrival seem anxious to start and fit in; either they achieve quickly or this enthusiasm wears thin and they languish." From the point of

TABLE 4

Teachers' Responses on Ease of Disciplining LEP Students

Easy		Difficult		Same		Depends on personality of child	
n	%	*n*	%	*n*	%	*n*	%
61	45	23	17	39	29	12	9

Note: Total number of responses for this question was 135.

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view of some regular teachers, however, even if the LEP students were easier to discipline, "they take more time away from class."

Open-ended comments regarding discipline evoked many responses related to the ethnic origin of LEP students. Asian students were viewed as very well disciplined and having high respect for adults. Hispanic students, whenever they were mentioned, were looked upon as "difficult to discipline and requiring greater attention and time than other students." At the very least, teachers mentioned keeping these same students busy so they would stay out of trouble.

Comments about ethnic groups were offered spontaneously; they were not elicited by any specific question in the survey. However, all comments which referred to Hispanic students were negative. These students were viewed as "discipline problems." Even though the teachers acknowledged in Question 14 that they had had little contact with Hispanic parents, they nevertheless attributed such discipline problems to the parents and the home: "The Hispanic students come from restrictive environments; when they arrive in school, they go wild." A teacher of Puerto Rican students commented, "Puerto Rican students are disruptive because they are babied by parents." In still other cases, the behavior of this same group was attributed to the culture's "lack of appreciation for education." As one respondent put it, "Some cultures have a high regard for teachers. Hispanic cultures do not and discipline problems arise." Obviously these stereotypic interpretations of behavior reflect an ingrained ethnocentric bias on the part of some teachers. While these interpretations clearly reveal cultural disjuncture between teachers and LEP students, the dynamics of the classroom interaction on which these interpretations were based is undoubtedly complex and requires empirical investigation.

Some regular teachers attributed the academic difficulties of LEP students in the regular classroom to laziness or a lack of effort: "ESL students are not interested in putting forth the effort." Attempts by ESL teachers to suggest to the regular teacher appropriate work at the functional level of the student were viewed as an excuse for the student's lack of interest: "Some ESL students have problems but this is not an excuse for not learning or to hide their lack of effort." On the other hand, some respondents recognized that their ability to assess the competencies of LEP students was too easily masked by those students' lack of oral proficiency: "You don't know how capable they are." Again, it appears that the regular teachers' lack of knowledge about LEP students can lead them to negative interpretations of LEP behavior, and these no doubt interfere with the learning process.

But it must not be construed from the above that *all* respondents had a completely negative view of LEP students. When asked, "What contributions do LEP students make to your class?" (Question 8), teachers acknowledged in their comments that these students enhanced the learning atmosphere in several ways. They noted the multiculturalism which the LEP student introduced into the classroom: "They teach cultural tolerance." LEP students were observed to be positive role models for the regular students in terms of behavior ("They serve as good examples for English-speaking students because they are conscientious and well-mannered") and in their determination and motivation ("They show other children that anyone can accomplish anything if they put their mind to it." "They have an enthusiasm to learn"). Teachers mentioned also that the presence of LEP students in the regular classroom increased cooperation among the regular students: "They add to cohesiveness because other children need to cooperate more closely to assist LEP students." One teacher found LEP students to be extremely helpful in tutoring low-achieving native speakers of English.

Teachers' comments about ethnic groups in their classes indicate their personal interpretations of what clearly seems to be cultural disjuncture in classroom discourse. Although it is difficult to arrive at any conclusions without observing classroom interaction, Wong Fillmore's (1986) discussion of classroom observations of Asian and Hispanic students provides a clue. She found that when Chinese children were confronted with curriculum material which lacked any real meaning to them, they responded by increasing their concentration. They regarded *themselves* as responsible for finding meaning. Hispanic students (mostly Mexican Americans), on the other hand, responded to irrelevant curriculum material by losing interest. These same students did very well when teachers presented well-organized instruction rich in content and emphasized comprehension and student participation in instructional activities. In short, the nature of the curriculum and the way it is presented may be the explanatory factor for the classroom disjuncture which these teachers' comments reflect.

Peer Interaction

Respondents often commented upon the tendency of LEP students to band together and consequently isolate themselves from the English-speaking students: "LEP students separate themselves from American-born and clique with their own ethnic group." A few respondents offered causes for this social behavior: "They aren't accepted as one of the crowd. Some may be accepted academically but not socially."

The conflict between LEP students and regular students merits investigation. (The term *regular student* does not refer to any definition of normality but rather to a proficient speaker of English who does not need help in second language development.) Many of the comments suggest that LEP students are stigmatized. An eighth grade teacher noted, "This age level seems to put down those from other countries—especially Hispanic students." Regular students may be jealous of the individual attention received by LEP students and consequently seek revenge by teaching them inappropriate classroom behavior and foul English: "Native speaking students ignore, taunt, or ask questions they can't understand." "When LEP students do finally attempt to participate in class, they are laughed at and ridiculed." Several teachers sought solutions for dealing with this awkward situation.

Despite the grim realities of peer friction, some respondents did offer positive suggestions for integrating LEP students into the regular classroom. One teacher assigned one or two academically oriented English-speaking students to serve as partners or buddies to help the new student learn the "ways of the classroom." Another solved the problem of social integration by assigning group-collaboration projects. Others sought to bridge cultural differences by having LEP students share something about their home country with the class or by introducing a lesson on friendship and kindness. And finally, one respondent commented on the value of sports activities as a socializer and means for integrating the LEP student.

The lack of social integration of LEP students into regular classrooms, and perhaps the entire school, is clearly apparent in the comments about peer interaction. In some cases, LEP students are treated by their peers as outcasts. Such a negative social climate is especially detrimental to L2 development, not to mention the psychological impact on self-concept and self-worth. It is generally agreed by L2 researchers that a healthy climate among peers who speak the second language can influence the kind of language that is acquired and the speed with which it is acquired (Hatch, 1978; McLaughlin, 1978).

In the survey, those teachers who recognized the problem of social acceptance by peers reacted with empathy. While some of them viewed their role as passive and nonintervening, others sought strategies for handling the situation. This suggests that some teachers define their job as an academic one in which content is taught and that others understand the importance of a positive social climate for academic and L2 learning. The impact of each of these attitudes upon the LEP student is apparent.

Role of the ESL Teacher

Diverse responses and comments were obtained from Questions 12 and 13: "Which subjects or skills should the ESL teacher teach during ESL class?" and "What is the role of the ESL teacher as you see it?" One comment uncovered an attitude of very real jealousy and conflict toward the ESL teacher: "The ESL teacher's job is to take credit for bright students and to assign blame for slower students." For the most part, regular teachers' comments suggested the strong belief that it was not their responsibility to learn how or know how to teach LEP students. This was especially true where language development was concerned: "ESL is the job of ESL teachers. We are not hired to teach an ESL student English." However, the respondents did not hesitate in expecting the ESL teacher to teach the subject matter of regular teachers as well as to perform many other tasks.

A content analysis of the respondents' expectations of what ESL teachers' work should consist of suggested five different roles: (a) language/reading teacher, (b) subject-matter teacher, (c) liaison between the teacher and LEP student and parents, (d) cross-cultural interpreter, and (e) consultant to the regular teacher.

Although the respondents expected ESL teachers to help students learn to function in English, many viewed this primarily to mean teaching them to read. Teachers in the lower elementary grades specified that the work of the ESL teacher should be the teaching of sight word mastery and phonics.

Above all, ESL teachers were expected to teach academic skills and subject matter, especially the major subject areas, including spelling, social studies, science, the math curriculum which regular students followed, and other grade-level skills. One respondent even felt that the ESL teacher should reinforce all the subject matter taught in the regular classroom in the native language of each student. The unbelievable assumption that ESL teachers spoke the native language of each student and in fact taught in this language was expressed repeatedly.

ESL teachers were expected to play the role of liaison between regular teachers and the parents of LEP students. For example, regular teachers presumed that their colleagues in ESL would be present when parent-teacher conferences were necessary. In fact, communicating with the parents of LEP students was too often viewed as the job of the ESL teacher *only*. When asked, "In what way do you communicate with the parents of LEP students?" (Question 14), one respondent replied, "I don't. That is the ESL teacher's job."

Regular teachers also held ESL teachers responsible for the role of cross-cultural interpreter. They were expected not only to know the cultural customs and values of each of their students but also to teach them the rules of the American classroom. A review of the comments made by regular teachers indicates that "helping the student understand classroom rules" and "how to behave" had a higher priority to some classroom teachers than teaching English to the LEP student. From their various comments, it is obvious that regular teachers expected LEP students to follow the assumed norms of their classrooms, whether or not they were proficient in English.

Regular teachers viewed the ESL teacher as *the* contact through whom they worked. They wanted to be kept informed about the LEP student's progress. From their perspective, the student was helped most when ESL teachers and regular teachers worked cooperatively: "The ESL teacher can't go it alone isolated from the staff." This comment strongly suggests that ESL teachers were expected to serve as consultants and advisers to regular teachers by monitoring the progress of LEP students and finding appropriate materials for these students in regular classrooms.

The comments of these respondents, who represent a wide range of school levels and districts, indicate how little regular teachers seem to know about the job of ESL teachers and, consequently, how much they expect of them. Perhaps this misunderstanding leads to the lack of cooperation between the two professional groups and to the isolation of ESL teachers. One of the major complaints of ESL teachers in the field (which this writer has heard expressed repeatedly in her years of training such teachers) is that their colleagues isolate them. It is ironic that regular teachers believe ESL teachers choose their own isolation when many of them would like advice and help from these specialists. Somehow ESL teachers must be brought out of their isolation so that greater cooperation can be achieved between the two professional groups. One of the most important functions of the ESL teacher may well be not merely to teach the LEP student, but more significantly to provide inservice training of regular teachers.

CONCLUSION

The following broad recommendations are suggested on the basis of the survey results:

1. More training in handling the LEP student must be provided for regular classroom teachers and administrators. All regular teachers and administrators should be required, as part of their preservice training, to have at least one course dealing with the LEP student in the school. This is an especially important requirement in those states with large immigrant populations. For those currently teaching, inservice training must be provided as one mechanism for improving classroom conditions for LEP students. Administrators play a key role in encouraging this process; thus, ESL teachers must work hard at educating and informing administrators of the need for such training so that time for inservice workshops can be provided yearly in the school schedule.

2. ESL teachers must provide direct help to regular teachers on how to teach the LEP student. ESL teachers must develop strategies for increasing cooperation and collaboration with regular classroom teachers, even though negative and resistant attitudes may block their attempts initially. They must devote more professional time to advising and consulting with these teachers.

3. Teacher training programs must be sensitive to the professional needs of the ESL teacher in the field. They must teach the ESL teacher to train the regular classroom teacher through inservice workshops and informal strategies for best meeting the needs of the LEP student. This training should include classroom techniques on how to integrate content and language, how to improve the social climate, and how to alter the social organization of the classroom. This is necessary if the LEP student is to receive the same access to excellence in education as the regular student does.

■

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APPENDIX

Survey Instrument

1. School District: Training in ESL:
2. Grade you currently teach:
3. Number of ESL students in your classroom? How long each day?
4. What is their country of origin?
5. Which programmatic approach is better suited to ESL students? (circle one)
   a. regular classes only
   b. regular classes + an ESL class
   c. bilingual education
   d. only ESL
   Why?
   At what point in their language development should ESL students be placed in the regular or content classroom totally?
6. Which subject is easiest to teach ESL students? the most difficult?
7. What frustrates you most in dealing with ESL students?
8. What contributions do ESL students make to your class?
9. Are ESL students easier or more difficult to discipline? What problems do they create for the classroom?
10. Which of the following would help you most in dealing more effectively with ESL students? (choose only 3)
    ______ Better communication between ESL teachers and regular teachers.
    ______ More time to adapt regular assignments/lessons to ESL students.
    ______ Techniques on how to teach content to ESL students.
    ______ More familiarity with materials for ESL students.
    ______ Information about cultures represented by ESL students.
    ______ Materials prepared by the ESL teacher for ESL students in your classrooms.
11. In your opinion, how much of the student's school day should be spent with the ESL teacher?
12. Which subjects or skills should the ESL teacher teach during ESL class?
13. What is the role of the ESL teacher as you see it?
14. In what way do you communicate with the parents of ESL students?
15. What problems do ESL students have in adjusting to their peers? How have you dealt with these?

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